

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Jeff EDER

Serial No.: 09/764,068

Filed: January 19, 2001

For: A method of and system for defining and measuring the real options of a commercial enterprise

Group Art Unit: 3684

Examiner: J. Liversedge

**Brief on Appeal**

Sir or Madam:

The Appellant respectfully appeals the rejection of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 46, claim 47, claim 48, claim 49, claim 50, claim 51, claim 52, claim 53, claim 54, claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 64, claim 65, claim 67, claim 68, claim 69, claim 70, claim 71, claim 72, claim 73, claim 74 and claim 75 in the March 31, 2009 Office Action for the above referenced application. The Table of Contents is on page 2 of this paper.

The appeal brief is being sent in response to the notice of non compliant appeal brief mailed on November 2, 2009. The Appellant notes that the attempt in that notice to exclude the claim amendments is improper as the amendments were not made after the filing of a notice of appeal as prohibited by 37 CFR 41.33 and they were not made after the receipt of a final rejection as prohibited by 37 CFR 1.116.

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### **1. Real party in interest**

Asset Reliance, Inc. (dba Asset Trust, Inc.) is the Appellant and the owner of 100% interest in the above referenced patent application.

### **2. Related appeals**

An Appeal for U.S. Patent Application 09/940,450 filed on August 29, 2001 may be affected by or have a bearing on this appeal. An Appeal for U.S. Patent Application 10/166,758 filed on June 12, 2002 may be affected by or have a bearing on this appeal. An Appeal for U.S. Patent Application 10/743,616 filed on December 22, 2003 may be affected by or have a bearing on this appeal.

### **3. Status of Claims**

Claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 46, claim 47, claim 48, claim 49, claim 50, claim 51, claim 52, claim 53, claim 54, claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 64, claim 65, claim 67, claim 68, claim 69, claim 70, claim 71, claim 72, claim 73, claim 74 and claim 75 are rejected and are the subject of this appeal. Claims 37, 55, 67, 68, 72 and 75 are amended. Claims 1 – 35 and 66 are cancelled.

### **4. Status of Amendments**

An amendment/reply that contained amendments to correct clerical errors in claims 37, 55, 67, 68, 72 and 75 was filed on June 30, 2009 is incorporated herein.

### **5. Summary of Claimed Subject Matter**

One embodiment of a detailed method of and system for defining and measuring the real options of a commercial enterprise according to the present invention is best depicted in Figures 1 – 7 of the specification for the instant application. Figure 1 gives an overview of the major processing steps which include transforming data from a plurality of disparate database management systems into an integrated database, analyzing the data as required to develop a model of enterprise market value by element of value and category of value and then using the model to analyze changes and produce reports.

**Independent claim 36** - One embodiment of the system for defining and measuring the real options of a commercial enterprise is exemplified in independent claim 36 where a computer implemented process prepares enterprise related data from a plurality of management systems for use in processing and analyzes the data using a series of multivariate analyses in order to

develop a model of enterprise market value by element and category of value. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

The computer system is described in FIG. 3, reference numbers 100, 110 – 118, 120 – 128 and 130 – 138 and line 24, page 15 through line 11, page 17 of the specification.

*a) preparing data representative of an enterprise for use in processing* - data representative of the enterprise are prepared for use in processing by converting, integrating and storing the data in the application database (50) as described in FIG. 1, reference number 200, FIG. 5A reference numbers 201, 202, 203, 204, 207, 208, 209 and 211 FIG. 5B reference numbers 221, 222, 225, 226, 209 and 211, FIG. 5C reference numbers 241, 242, 245, 246, 209 and 211, FIG. 5D reference numbers 261, 262, 265, 267, 269, 209 and 211, FIG. 5E reference numbers 268, 269, 272, 278, 279, 281 and 282, FIG. 5F reference numbers 291, 292, 293, 294, 295, 296, 297 and 298, and line 1, page 14 through line 18, page 47 of the specification.

*b) transforming at least a portion of the data into a model of an enterprise market value by an element and category of value by completing a series of multivariate analyses that utilize said data* - the integrated data are then analyzed using a series of multivariate analyses in order to create a model of enterprise market value that identifies a tangible impact of each element of value on each category of value in accordance with the procedure detailed in FIG. 1, reference number 300, FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20, page 47 through line 30, page 75 of the specification.

*c) where the categories of value are selected from the group consisting of current operation, real option, market sentiment and combinations thereof* – the categories of value are described in several places including Table 1 on page 9 of the specification.

*d) where the model of enterprise market value identifies and outputs a tangible contribution of each element of value to each category of value* – the identification of a tangible contribution for each element of value is described in several places including line 18, page 11 through line 2, page 12 of the specification, and

*e) where the elements of value are selected from the group consisting of alliances, brands, channels, customers, employees, intellectual property, partnerships, processes, vendors and combinations thereof* – the elements of value are described in several places including Table 1 on page 9 of the specification.

Claim 37 - The limitations and activities associated with dependent claim 37 are described in several places including FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20, page 47 through line 30, page 75 of the specification. The output of the model is then analyzed and reported in accordance with the procedure detailed in FIG. 1 reference number 400, FIG. 7 reference numbers 402, 403, 404, 405, 406 and 407 and line 33, page 75 through line 30, page 77 of the specification and cross-referenced patent 5,615,109.

Claim 38 - The limitations associated with dependent claim 38 are described in several places including line 7, page 54 through line 5, page 56 and lines 21 through 33 of page 58 of the specification and FIG. 5B, block 615 and column 68, line 1 through line 5 of cross referenced U.S. Patent 5,615,109.

Claim 39 - The limitations associated with dependent claim 39 are described in several places including FIG. 6A reference number 302 - 312, FIG. 6B reference numbers 321, 323 and 325 - 332, FIG. 6C reference numbers 341 - 343, 345, 347 and 351 - 353 and line 20, page 47 through line 30, page 75 of the specification. The value of each element of value is then reported in accordance with the procedure detailed in FIG. 1 reference number 400, FIG. 7 reference numbers 402, 403, 404, 405, 406 and 407 and line 33, page 75 through line 30, page 77 of the specification and cross-referenced patent 5,615,109.

Claim 40 - The limitations associated with dependent claim 40 are described in several places including FIG. 6A reference number 306 and line 1 through line 4 on page 52 of the specification.

Claim 41 - The limitations associated with dependent claim 41 are described in several places including FIG. 1 reference number 5, 10, 12, 15, 25, 30, 35 and 37, line 10 through line 15 on page 14 and line 5 through line 15, page 27 of the specification.

Claim 42 - The limitations associated with dependent claim 42 are described in several places including FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20, page 47 through line 30, page 75 of the specification.

Claim 43 - The limitations associated with dependent claim 43 are described in several places including FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312,

FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20, page 47 through line 30, page 75 of the specification.

Claim 44 - The limitations associated with dependent claim 44 are described in several places including Table 15 on page 29 of the specification.

Claim 45 - The limitations associated with dependent claim 45 are described in several places including line 7, page 54, line 5, page 56 and lines 21 through 33 of page 58 of the specification and FIG. 5B, block 615 and column 68, line 1 through line 5 of cross referenced U.S. Patent 5,615,109.

**Independent claim 46** - A second embodiment of the system for defining and measuring the real options of a commercial enterprise is exemplified in independent claim 46 where an article of manufacture instructs a computer system to prepare enterprise related data from a plurality of management systems for use in processing and analyze the data using a series of multivariate analyses in order to develop a model of enterprise market value by element and category of value. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

The computer system is described in FIG. 3, reference numbers 100, 110 – 118, 120 – 128 and 130 – 138 and line 24, page 15 through line 11, page 17 of the specification.

*a) preparing data representative of an enterprise for use in processing* - data representative of the enterprise are prepared for use in processing by converting, integrating and storing the data in the application database (50) as described in FIG. 1, reference number 200, FIG. 5A reference numbers 201, 202, 203, 204, 207, 208, 209 and 211 FIG. 5B reference numbers 221, 222, 225, 226, 209 and 211, FIG. 5C reference numbers 241, 242, 245, 246, 209 and 211, FIG. 5D reference numbers 261, 262, 265, 267, 269, 209 and 211, FIG. 5E reference numbers 268, 269, 272, 278, 279, 281 and 282, FIG. 5F reference numbers 291, 292, 293, 294, 295, 296, 297 and 298, and line 1, page 14 through line 18, page 47 of the specification.

*b) transforming at least a portion of the data into a causal model of each of one or more categories of an organization value that identify and output a tangible value contribution of each of one or more elements of value to a current operation and a real option category of value* - the integrated data are then analyzed using a series of multivariate analyses in order to create a model of enterprise market value that identifies a tangible impact of each element of value on each category of value in accordance with the procedure detailed in FIG. 1, reference number

300, FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353, Table 1 on page 9, line 18, page 11 through line 2, page 12 and line 20, page 47 through line 30, page 75 of the specification.

*c) reporting the value contribution of the elements of value using an electronic display or a paper document* - the value of each element of value is reported in accordance with the procedure detailed in FIG. 1 reference number 400, FIG. 7 reference numbers 402, 403, 404, 405, 406 and 407 and line 33, page 75 through line 30, page 77 of the specification.

Claim 47 - The limitations associated with dependent claim 47 are described in several places including Table 1, page 9 and line 5 through line 15, page 27 of the specification.

Claim 48 - The limitations associated with dependent claim 48 are described in several places including FIG 6C reference number 347 and line 22, page 70 through line 20, page 71 of the specification.

Claim 49 - The limitations associated with dependent claim 49 are described in several places including FIG 6B reference number 331 and line 25, page 63 through line 20, page 65 of the specification.

Claim 50 - The limitations associated with dependent claim 50 are described in several places including FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20, page 47 through line 30, page 75 of the specification.

Claim 51 - The limitations associated with dependent claim 51 are described in several places including Table 32 on page 64 of the specification.

Claim 52 - The limitations and activities associated with dependent claim 52 are described in several places including FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 10, page 56 through line 30, page 75 of the specification.

Claim 53 - The limitations associated with dependent claim 53 are described in several places including line 8, page 30 through line 15, page 30 of the specification.

Claim 54 - The limitations associated with dependent claim 54 are described in several places

including FIG 6A reference number 309 and line 15, page 54 through line 20, page 55 of the specification.

**Independent claim 55** - A third embodiment of the system for defining and measuring the real options of a commercial enterprise is exemplified in independent claim 55 where a computer implemented process prepares enterprise related data from a plurality of management systems for use in processing and transforms the data into causal models of the categories of value. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

The computer system is described in FIG. 3, reference numbers 100, 110 – 118, 120 – 128 and 130 – 138 and line 24, page 15 through line 11, page 17 of the specification.

*a) preparing data representative of an enterprise for use in processing* - data representative of the enterprise are prepared for use in processing by converting, integrating and storing the data in the application database (50) as described in FIG. 1, reference number 200, FIG. 5A reference numbers 201, 202, 203, 204, 207, 208, 209 and 211 FIG. 5B reference numbers 221, 222, 225, 226, 209 and 211, FIG. 5C reference numbers 241, 242, 245, 246, 209 and 211, FIG. 5D reference numbers 261, 262, 265, 267, 269, 209 and 211, FIG. 5E reference numbers 268, 269, 272, 278, 279, 281 and 282, FIG. 5F reference numbers 291, 292, 293, 294, 295, 296, 297 and 298, and line 1, page 14 through line 18, page 47 of the specification.

*b) transforming at least a portion of the data into a causal model of each of one or more categories of an organization value that calculate and output a tangible value contribution of each of one or more elements of value to a future market value and each of the categories of organization value*- the integrated data are then analyzed using a series of multivariate analyses in order to create causal category of value models that identify a tangible impact of each element of value on each category of value in accordance with the procedure detailed in FIG. 1, reference number 300, FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20, page 47 through line 30, page 75 of the specification.

*c) where the categories of value are selected from the group consisting of current operation, real option, market sentiment and combinations thereof* – the categories of value are described in several places including Table 1 on page 9 of the specification.

*d) where the elements of value are selected from the group consisting of alliances, brands, channels, customers, employees, intellectual property, partnerships, processes, vendors and*



*combinations thereof* – the elements of value are described in several places including Table 1 on page 9 of the specification.

Claim 56 - The limitations associated with dependent claim 56 are described in several places including Table 15 on page 29 of the specification.

Claim 57 - The limitations associated with dependent claim 57 are described in several places including FIG. 1, reference number 200 and 300, FIG. 5A reference numbers 201 - 204, 207 – 209 and 211 FIG. 5B reference numbers 221 – 222, 225 – 226, 209 and 211, FIG. 5C reference numbers 241 – 242, 245 – 246, 209 and 211, FIG. 5D reference numbers 261 – 262, 265, 267, 269, 209 and 211, FIG. 5E reference numbers 268 – 269, 272, 278 - 279 and 281 - 282, FIG. 5F reference numbers 291 - 298, FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20 and line 1, page 14 through line 30, page 75 of the specification.

Claim 58 - The limitations associated with dependent claim 58 are described in several places including FIG 6C reference number 347 and line 22, page 70 through line 20, page 71 of the specification.

Claim 59 - The limitations associated with dependent claim 59 are described in several places including FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20, page 47 through line 30, page 75 of the specification.

Claim 60 - The limitations associated with dependent claim 60 are described in several places including FIG 6C reference number 347 and line 22, page 70 through line 20, page 71 of the specification.

Claim 61 - The limitations associated with dependent claim 61 are described in several places including table 1, page 9 of the specification.

Claim 62 - The limitations associated with dependent claim 62 are described in several places including FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20, page 47 through line 30, page 75 of the specification.

Claim 63 - The limitations associated with dependent claim 63 are described in several places FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353, FIG. 7 reference numbers 402, 403, 404, 405, 406 and 407 and line 20, page 47 through line 30, page 77 of the specification and cross-referenced patent 5,615,109.

**Independent claim 64** - A fourth embodiment of the system for defining and measuring the real options of a commercial enterprise is exemplified in independent claim 64 where a computer implemented process uses independent components of application software to transform data that has been integrated from a plurality of management systems in accordance with a common model or xml schema into a predictive model. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

The computer system is described in FIG. 3, reference numbers 100, 110 – 118, 120 – 128 and 130 – 138 and line 24, page 15 through line 11, page 17 of the specification.

*a) using two or more independent components of application software to produce one or more useful results by transforming data representative of a physical object or substance into a predictive model that has a utility in managing or monitoring a real world activity of said object or substance* - data are processed in accordance with the procedure detailed in FIG. 1, reference number 300, FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20, page 47 through line 30, page 75 of the specification.

*b) where said data has been aggregated from two or more systems in accordance with a common model or schema defined by an xml metadata standard.* - data from the database management systems associated with a plurality of systems are converted, integrated and stored in accordance with a common model or schema defined by xml metadata as described in FIG. 1, reference number 200, FIG. 5A reference numbers 201, 202, 203, 204, 207, 208, 209 and 211 FIG. 5B reference numbers 221, 222, 225, 226, 209 and 211, FIG. 5C reference numbers 241, 242, 245, 246, 209 and 211, FIG. 5D reference numbers 261, 262, 265, 267, 269, 209 and 211, FIG. 5E reference numbers 268, 269, 272, 278, 279, 281 and 282, FIG. 5F reference numbers 291, 292, 293, 294, 295, 296, 297 and 298, and line 1, page 14 through line 18, page 47 of the specification.

Claim 65 - The limitations associated with dependent claim 65 are described in several places

including FIG. 6A reference numbers 308 - 311 and line 30, page 53 through line 20, page 56 of the specification.

Claim 67 - The limitations associated with dependent claim 67 are described in several places including FIG. 5A reference numbers 201, 202, 203, 204, 207, 208, 209 and 211 FIG. 5B reference numbers 221, 222, 225, 226, 209 and 211, FIG. 5C reference numbers 241, 242, 245, 246, 209 and 211, FIG. 5D reference numbers 261, 262, 265, 267, 269, 209 and 211, FIG. 5E reference numbers 268, 269, 272, 278, 279, 281 and 282, FIG. 5F reference numbers 291, 292, 293, 294, 295, 296, 297 and 298, FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 1, page 14 through line 30, page 75 of the specification.

Claim 68 - The limitations associated with dependent claim 68 are described in several places including FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20, page 47 through line 30, page 75 of the specification.

Claim 69 - The limitations associated with dependent claim 69 are described in several places including FIG. 1 reference number 5, 10, 12, 15, 25, 30, 35 and 37, line 10 through line 15 on page 14 and line 5 through line 15, page 27 of the specification.

**Independent claim 70** - A fifth embodiment of the system for defining and measuring the real options of a commercial enterprise is exemplified in independent claim 70 where a computer implemented process converts, integrates and stores data from a plurality of management systems into an integrated database. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

The computer system is described in FIG. 3, reference numbers 100, 110 – 118, 120 – 128 and 130 – 138 and line 24, page 15 through line 11, page 17 of the specification.

*a) integrating, converting and storing data representative of an organization from a plurality of disparate sources in accordance with a common xml schema in order to transform said data into an integrated database, and outputting said database* - the process of converting, integrating and storing data from a plurality of disparate sources and outputting an integrated database (50) is described in FIG. 1, reference number 200, FIG. 5A reference numbers 201, 202, 203, 204, 207, 208, 209 and 211 FIG. 5B reference numbers 221, 222, 225, 226, 209 and 211, FIG. 5C

reference numbers 241, 242, 245, 246, 209 and 211, FIG. 5D reference numbers 261, 262, 265, 267, 269, 209 and 211, FIG. 5E reference numbers 268, 269, 272, 278, 279, 281 and 282, FIG. 5F reference numbers 291, 292, 293, 294, 295, 296, 297 and 298, and line 1, page 14 through line 18, page 47 of the specification;

*b) where a set of integration and conversion rules are established using a metadata and conversion rules window and saved in metadata mapping table* - the acquisition of conversion rules using a metadata and conversion rules window (702) is described in FIG. 5A, reference number 203. These rules are stored in the metadata mapping table (141) as described on line 17, page 30 through line 33, page 30 of the specification.

Claim 71 - The limitations associated with dependent claim 71 are described in several places including FIG. 5A reference numbers 202 and 203, line 8, page 30 through line 33, page 30 of the specification.

**Independent claim 72** - A sixth embodiment of the system for defining and measuring the real options of a commercial enterprise is exemplified in independent claim 72 where a machine prepares data from a plurality of management systems for use in processing and analyzes the data in order to identify a contribution of each element of value to each category of value. The identified contributions are then reported in a balance sheet format. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

*a) a computer with a processor having circuitry to execute instructions; a storage device available to said processor with sequences of instructions stored therein, which when executed cause the processor to complete a computer implemented market value accounting method* - the computer is described in FIG. 3, reference numbers 100, 110 – 118, 120 – 128 and 130 – 138 and line 24, page 15 through line 11, page 17 of the specification.

*b) preparing data representative of an organization for use in processing* - data representative of the organization are prepared for use in processing by converting, integrating and storing the data in the application database (50) as described in FIG. 1, reference number 200, FIG. 5A reference numbers 201, 202, 203, 204, 207, 208, 209 and 211 FIG. 5B reference numbers 221, 222, 225, 226, 209 and 211, FIG. 5C reference numbers 241, 242, 245, 246, 209 and 211, FIG. 5D reference numbers 261, 262, 265, 267, 269, 209 and 211, FIG. 5E reference numbers 268, 269, 272, 278, 279, 281 and 282, FIG. 5F reference numbers 291, 292, 293, 294, 295, 296, 297 and 298, and line 1, page 14 through line 18, page 47 of the specification.

*c) transforming at least a portion of the data into a model of each of one or more categories of an organization value that identify and output a tangible contribution of each of one or more*

*elements of value to the categories of organization value by completing a series of analyses where the categories of value further comprise a current operation category of value and a category of value selected from the group consisting of real option, market sentiment and combinations thereof, - the integrated data are then analyzed using a series of multivariate analyses in order to create a model of enterprise market value that identifies a tangible impact of each element of value on each category of value in accordance with the procedure detailed in FIG. 1, reference number 300, FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353, Table 1 on page 9 and line 20, page 47 through line 30, page 75 of the specification.*

*d) using the tangible contribution for each element of value to identify a market value for each element of value and report the value of each element of value in a balance sheet format – the calculation and display of the valuations for the elements of value is described in FIG. 7, reference number 402 and line 1 through line 13, page 76 of the specification.*

*e) where the reported value is a value for a specific point in time within a sequential series of points in time – the time period is set by the system date as described on line 8, page 30 through line 15 of the specification.*

Claim 73 - The limitations associated with dependent claim 73 are described in several places including table 1, page 9, FIG. 7 reference numbers 402, 403, 404, 405, 406 and 407 and line 33, page 75 through line 30, page 77 of the specification.

Claim 74 - The limitations associated with dependent claim 74 are described in several places including FIG. 5A reference numbers 202 and 203, FIG. 7 reference numbers 402, 403, 404, 405, 406 and 407, line 8, page 30 through line 33, page 30 and line 33, page 75 through line 30, page 77 of the specification.

Claim 75 - The limitations associated with dependent claim 75 are described in several places including Table 1 on page 9 of the specification.

## **6. Grounds of rejection to be reviewed on appeal**

**Issue 1** - Whether claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45, are patentable under 35 USC §103(a) over “Premium Drivers of Post Deal Value” in Mergers and Acquisitions (hereinafter, Bielinski) alone, in view of “The 1986-88 Stock Market: Investor Sentiment or Fundamentals?” (hereinafter, Baur), in view of Baur and U.S. Patent 6,192,354 (hereinafter, Bigus) or in view of Baur and U.S. Patent 4,989,141 (hereinafter,

Lyons)?

**Issue 2** – Whether claim 55, claim 58, claim 59, claim 60, claim 61, claim 62 and claim 63 are patentable under 35 USC §103(a) over Bielinski alone, in view of Baur, in view of Baur and Bigus or in view of Baur and Lyons?

**Issue 3** – Whether claim 72, claim 73, claim 74, claim 75 and claim 47 are patentable under 35 USC §103(a) over Bielinski alone, in view of Baur, in view of Baur and Bigus or in view of Baur and Lyons?

**Issue 4** - Whether claim 49, claim 50, claim 51 and claim 52 are patentable under 35 USC §103(a) over Bielinski in view of “Get Real” (hereinafter, Mauboussin) or in view of U.S. Patent 5,245,696 (hereinafter, Stork)?

**Issue 5** – Whether claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71 are patentable under 35 USC §103(a) over U.S. Patent 7,249,328 (hereinafter, Davis) in view of Bielinski, in view of U.S. Patent 6,549,922 (hereinafter, Srivastava) or in view of “Building Customer and Shareholder Value” (hereinafter, Cleland)?

**Issue 6** - Whether claim 46, claim 48, claim 53 and claim 54 are anticipated under 35 USC §102(b) by Bielinski?

**Issue 7** - Whether the invention described in claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 64, claim 65, claim 67, claim 68, claim 69, claim 70, claim 71, claim 72, claim 73 and claim 74 represents statutory subject matter under USC §101?

**Issue 8** – Whether the invention described in claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71 are enabled under 35 USC §112, first paragraph?

**Issue 9** – Whether claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 70 and/or claim 71 are indefinite under 35 USC §112, second paragraph?

## **7. The Argument**

For each ground of rejection which Appellant contests herein which applies to more than one claim, such additional claims, to the extent separately identified and argued below, do not stand and fall together.

**Issue 1** - Whether claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45 are patentable under 35 USC §103(a) over Bielinski alone

**or in view of Baur, in view of Baur and Bigus or in view of Baur and Lyons?**

The claims are patentable because the claim rejections are based on four hundred sixty one (461) errors in the facts and in the law. Because of these errors, the cited combination of teachings (Bielinski, Baur, Bigus and Lyons) and the arguments related to the cited combination of teachings fail to establish a prima facie case of obviousness for every rejected claim as detailed below.

**Errors 1 through 116** – It is well established that: *“in determining the difference between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious but whether the claimed invention as a whole would have been obvious (Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983)).”* Furthermore, it is well established that: *A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).* Errors in the claim rejections caused by the failure to acknowledge the fact that all the cited references teach away from the invention described in claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45 include:

Errors #1 through #10) A failure to acknowledge that Bielinski teaches away from the claimed method of analyzing and modeling enterprise financial performance by category of value. Bielinski, which is the primary reference for all obviousness rejections, teaches and relies on the VBM method of discounted cash flow modeling. VBM uses Shareholder Value Analysis (hereinafter, SVA) principles, including a tree based model of cash flow, but advances the technique by using historical data, operations linked value drivers and concurrent changes in multiple value drivers. In accordance with the VBM/SVA method, most of the tree is used for calculating the actual cash flow for prior periods. The remainder of the tree is used for determining the cost of capital used to discount the cash flow. Putting the two parts of the tree together, the VBM method teaches that the only way to increase enterprise value is to increase the value of period cash flow (see Bielinski and Evidence Appendix, pages 120 – 122).

Categories of value per 09/764,068	Categories of value per Bielinski
1. Current operation (cash flow), 2. Market sentiment, and 3. Real options.	1. Cash flow (current operation)

By way of contrast, the claimed invention teaches that as many as three categories of

value determine the value of an enterprise as shown in the table. By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45.

Errors #11 through #20) A failure to acknowledge that Baur teaches away from the claimed method of analyzing and modeling enterprise financial performance by category of value. Baur focuses exclusively on the correlation between investor sentiment and weekly price changes for the stocks included in the S&P 500 index. As is well known in the art, share prices reflect the combined value of all the categories of value in an enterprise. In particular, Baur teaches that investor sentiment is an external factor that affects share prices (and all the categories of value) instead of being a separate category of value that has a value that is a function of element of value performance as claimed. By exclusively teaching methods that teach away from the claimed invention, Baur provides additional evidence of the novelty, non-obviousness and newness of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45.

Errors #21 through #30) A failure to acknowledge that Lyons teaches away from the claimed method of analyzing and modeling enterprise financial performance by category of value. Lyons teaching modeling financial performance by manipulating traditional financial schedule information. As is well known in the art, the traditional financial schedules Lyons relies on exclude two of the three categories of value. By exclusively teaching methods that teach away from the claimed invention, Lyons provides additional evidence of the novelty, non-obviousness and newness of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45.

Errors #31 through #40) A failure to acknowledge that Bielinski teaches away from the claimed analysis and modeling of enterprise financial performance by element of value. Bielinski teaches VBM that relies on SVA principles (including the use of a single tree of equations) to calculate an enterprise value from historical cash flow. The portion of the tree used for calculating historical cash flow is built by joining together a series of nodes where the inputs to each node are mathematically combined to produce a node output that becomes an input to a node at a higher level in the tree. The inputs to the VBM/SVA cash flow tree consist of: activity measures (i.e. volume of calls received, number of transactions completed and pounds of material used), counts (i.e. number of service delivery centers and number of employees), expenditure data (i.e. material costs, employee



annual salary and cost per station), and summary financial measures (i.e. inventory turnover ratio and sales growth rate) These inputs mathematically combine to produce the summary accounting numbers used for calculating the historical cash flow. None of the VBM inputs teach or suggest an “element of value” as defined in the written description.

By way of contrast, the claimed invention teaches that elements of value drive current operation cash flow and the other categories of value and that statistical summaries of element of value performance are the only inputs to the models of each category of value – including the current operation model.

Aspect of financial performance	Designation per 09/764,068	Designation per Bielinski
Raw material cost	Sub-component of expense value	Operational value driver
Production labor cost	Sub-component of expense value	Operational value driver

Consistent with the different teachings regarding the drivers of enterprise financial performance, Bielinski teaches a different definition of the term “value driver” and defines sub-components of expense value as operational value drivers (see Table). By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45.

Errors #41 through #50) A failure to acknowledge that Bielinski teaches away from the claimed multivariate statistical analysis of enterprise financial performance. Bielinski teaches a method that calculates the actual amount of enterprise cash flow (see Bielinski, Table 1). By teaching a reliance on actual numbers, Bielinski teaches away from the claimed multivariate statistical analysis. By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45.

Errors #51 through #60) A failure to acknowledge that Bielinski teaches away from analyzing employees and processes as elements of value that contribute to the value of one or more categories of value. Contrary to the statement made in the March 31, 2009 Office Action, Bielinski does not teach the analysis of alliances, employee, partners, processes and/or vendors as elements of value (or anything of the listed elements of value). None of these elements of value are mentioned or suggested in the Bielinski

document. Bielinski does mention human resource costs, material costs and scrap costs and as such teaches that human resources and processes that use materials are liabilities that should be minimized and not elements of value contribute to the value of the categories of value. By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45.

Errors #61 through #70) A failure to acknowledge that Bielinski teaches away from the claimed method of analyzing enterprise financial performance by teaching and relying on different assumptions regarding the relationship between input values and cash flow value. Bielinski teaches that inputs have a linear relationship to the value of cash flow. By way of contrast, the claimed invention teaches that inputs may have a linear or non-linear effect on the value of the categories of value. By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45.

Errors #71 through #80) A failure to acknowledge that Bielinski teaches away from the claimed method of analyzing enterprise financial performance by teaching and relying on different assumptions regarding market efficiency. In accordance with SVA principles, Bielinski teaches that the market is strong form, efficient (aka standard valuation model) and that market sentiment value is zero. By way of contrast, the claimed invention does not make any assumptions about market efficiency. Accordingly, the market may be strong form, efficient (market sentiment value is zero) or it may be inefficient (market sentiment value may be above or below zero). By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45.

Errors #81 through #90) A failure to acknowledge that Lyons teaches away from the claimed analysis of element of value contribution to the value of one or more categories of value. Lyons focuses exclusively on manipulating traditional financial statements which (as is well known in the art) rely on the book value of assets instead of valuing an asset based on its contribution to one or more categories of value. Furthermore, traditional financial statements exclude many if not all of the claimed elements of value: alliances,

brands, channels, customers, employees, intellectual property, partnerships, processes and vendors. By exclusively teaching methods that teach away from the claimed invention, Lyons provides additional evidence of the novelty, non-obviousness and newness of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45.

Errors #91 through #100) A failure to acknowledge that Baur teaches away from the claimed analysis of element of value contribution to the value of one or more categories of value. Baur focuses exclusively on the correlation between investor sentiment and weekly price changes for the S&P 500 (see Evidence Appendix, pages 111 – 114). Share prices reflect the combined contribution of all the elements of value in an enterprise. In particular, Baur teaches that external factors such as investor sentiment affect share prices (and all the categories of value). By way of contrast, the claimed invention teaches that the elements of value affect the categories of value and share prices. By exclusively teaching methods that teach away from the claimed invention, Baur provides additional evidence of the novelty, non-obviousness and newness of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45.

Errors #101 through #110) A failure to acknowledge that Lyons teaches away from the claimed method of preparing data. Lyons describes an invention that allows each user to define and produce financial reports. In particular, each user is free to define the terms used in the financial reports (see Lyons, Column 8, Lines 64 and 65 and Column 9, Line 13) at any point in the report definition process. By way of contrast, the claimed invention teaches and relies on the use of a single common definition for all the aspects of financial performance being analyzed. By exclusively teaching methods that teach away from the claimed invention, Lyons provides additional evidence of the novelty, non-obviousness and newness of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45.

Errors #111 and #112) A failure to acknowledge that Bielinski teaches away from the claimed method of optimizing an enterprise value. Bielinski teaches the use of sensitivity analysis and break even analysis to identify desirable changes in operation (see Bielinski, Table 2 and Table 3). By way of contrast, the claimed invention teaches and relies on the use of optimization analyses to identify the most valuable set of changes in a business operation. By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 37 and claim 38.

Errors #113 and #114) A failure to acknowledge that Bigus teaches away from the claimed method of optimizing an enterprise value. The purpose of the Bigus invention is to optimize the performance of a computer task by selecting the single best agent for the task. By way of contrast, the claimed invention teaches and relies on the use of optimization analyses to identify the most valuable set of changes in a business operation. By exclusively teaching methods that teach away from the claimed invention, Bigus provides additional evidence of the novelty, non-obviousness and newness of claim 37 and claim 38.

Errors #115 and #116) A failure to acknowledge that Bielinski teaches away from the claimed method of quantifying and optimizing a future enterprise market value. Bielinski teaches away from the use of projections that are required for a future value optimization analysis by teaching a strict reliance on five years of historical cash flow. Bielinski also teaches away from the claimed optimization analysis method as discussed under errors 111 and 112. By way of contrast, the claimed invention teaches the use of forecasts (aka projections) as part of a market value optimization analysis. By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 37 and claim 38.

Because the cited documents all exclusively teach methods that teach away from the claimed methods, the prima facie case of obviousness cannot be properly established.

**Errors 117 through 299** – It is well established that “when determining whether a claim is obvious, an examiner must make ‘a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art.’ In re Ochiai, 71 F.3d 1565, 1572 (Fed. Cir. 1995). Thus, ‘obviousness requires a suggestion of all limitations in a claim.’ CFMT, Inc. v. Yieldup Intern. Corp., 349 F.3d 1333, 1342 (Fed. Cir. 2003) (citing In re Royka, 490 F.2d 981, 985 (CCPA 1974)) Furthermore, the Board of Patent Appeal and Interferences recently confirmed (In re Wada and Murphy, Appeal No. 2007- 3733) that a proper, post KSR obviousness determination still requires that an examiner must make “a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art.” In re Ochiai, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (emphasis added). In other words, obviousness still requires a suggestion of all the limitations in a claim. Errors in the claim rejections caused by the apparent failure to acknowledge the fact that the cited documents do not teach one or more limitations of the claimed invention include:

Errors #117 through #246) Failure to acknowledge the fact that the cited documents do

not teach or suggest one or more limitations of claim 36 (affects claims 37, 38, 39, 40, 41, 42, 43, 44 and 45), including:

- a) transforming at least a portion of the data into a model of an enterprise market value by an element of value by completing a series of multivariate analyses that utilizes said data (#117 through #126),*
- b) transforming at least a portion of the data into a model of an enterprise market value by category of value by completing a series of multivariate analyses that utilizes said data (#127 through #136),*
- c) categories of value are selected from the group consisting of current operation, real option, market sentiment and combinations thereof (#137 through #146), ,*
- d) a model of enterprise market value identifies and outputs a tangible contribution of each element of value to each category of value (#147 through #156),*
- e) alliance elements of value (#157 through #166),*
- f) brand elements of value (#167 through #176),*
- g) channel elements of value (#177 through #186),*
- h) customer elements of value (#187 through #196),*
- i) employee elements of value (#197 through #206),*
- j) intellectual property elements of value (#207 through #216),*
- k) partnership elements of value (#217 through #226),*
- l) process elements of value (#227 through #236), and*
- m) vendor elements of value (#237 through #246).*

Errors #247 through #251) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 37, including:

- a) identifying a set of changes that will optimize an enterprise market value (#247),*
- b) quantifying a future enterprise market value (#248),*
- c) valuing an enterprise market sentiment (#249),*
- d) calculating a real option discount rate (#250), and*
- e) valuing a real option (#251).*

Errors #252 through #258) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 38, including:

- a) identifying one or more changes that will optimize revenue (#252),*
- b) identifying one or more changes that will optimize expense (#253),*
- c) identifying one or more changes that will optimize capital change (#254),*

- d) identifying one or more changes that will optimize real option value (#255),
- e) identifying one or more changes that will optimize future market value (#256),
- f) identifying one or more changes that will optimize market sentiment value (#257), and
- g) identifying one or more changes that will optimize one or more aspects of financial performance where said aspects of financial performance are selected from the group consisting of revenue, expense, capital change, cash flow, real option value, future market value, market sentiment value, market value and combinations thereof (#258).

Errors #259 through #279) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 39, including: *completing a series of multivariate analyses (#259), identifying one or more previously unknown item performance indicators (#260), discovering one or more previously unknown value drivers (#261), identifying one or more previously unknown relationships between one or more value drivers (#262), identifying one or more previously unknown relationships between one or more elements of value (#263), quantifying one or more inter-relationships between value drivers (#264), quantifying one or more impacts between elements of value (#265), developing one or more composite variables (#267), developing one or more vectors (#268), developing one or more causal element impact summaries (#269), identifying a best fit combination of a predictive model algorithm and one or more element of value impact summaries for modeling enterprise market value (#270) and each of the components of value (#271 - #273), determining a net element impact for each category of value (#274), determining a relative strength of the elements of value between two or more enterprises (#275), developing one or more real option discount rates (#276), calculating one or more real option values (#277), calculating an enterprise market sentiment value by element (#278) and combinations thereof (#279).*

Errors #280 through #288) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 40, including: *a method where a predictive model algorithm is selected from the group consisting of classification and regression tree (#280); generalized autoregressive conditional heteroskedasticity (#281), regression (#282); generalized additive (#283); redundant regression network (#284); rough-set analysis (#285); Bayesian (#286); multivariate adaptive regression spline (#287) and support vector method (#288).*

Errors #289 through #292) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 41, including: *where data are*

*obtained from web site systems (#289), the Internet (#290), external databases (#291) and combinations thereof (#292).*

Error #293) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 42, including: *using one or more composite applications to complete the processing.*

Errors #294 through #297) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 43, including: *a model of enterprise market value further that comprises a combination of component and category of value models selected from the group consisting of up to three predictive component of value models (#294), a real option discount rate model (#295), a real option valuation model (#296), a market sentiment model by element of value (#297) and combinations thereof.*

Error #298) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 44, including: *integrating data in accordance with a common schema where the common schema is defined by a CORBA metadata or an xml metadata.*

Error #299) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 45, including: *identifying one or more changes that will optimize a future market value portion of said enterprise market value.*

**Errors 300 through 339** - It is well established that when “*the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)*”. Errors in the claims rejections caused by the failure to acknowledge that principles of operation of the Bielinski invention would have to be changed to replicate the functionality of the claimed invention, include:

Errors #300 through #309) One principle of operation Bielinski relies on is the standard model which teaches that cash flow is the sole determinant of enterprise value. This principle of operation would have to be changed to replicate the functionality of the claimed invention and recognize the fact that enterprise value includes a number of categories of value (i.e. real options, market sentiment) that are not included in the standard model (see Evidence Appendix, pages 120 - 122). Affects all claims.

Errors #310 through #319) A second principle of operation that Bielinski relies on is the use of the actual prior period cash flow to calculate an enterprise value (see Bielinski and Evidence Appendix, pages 120 - 122). This principle of operation would have to be changed

to replicate the functionality of the claimed inventions because the claimed inventions rely on a series of multivariate statistical analyses where the only inputs are element of value impact summaries and the primary outputs are between one and zero (category valuations are determined separately). Changing to a series of analyses using statistical models for identifying relative contributions and separate models for calculating segment valuations would be a change in another principle of operation of the Bielinski invention. Affects all claims.

Errors #320 through #329) A third principle of operation that Bielinski teaches and relies on is that activities, counts, expenditures and summary measures determine cash flow and that value drivers are high level summaries of enterprise financial performance (i.e. operating profit margin). Bielinski also teaches that operational value drivers are sub-components of expense value (i.e. raw material cost, human resource cost), and/or summary financial statistics (inventory turnover and sales growth percentage). This principle of operation would have to be changed to replicate the functionality of the claimed inventions because the claimed inventions teach and rely on the fact that elements of value drive cash flow (and other segments of value) and that value drivers are characteristics of elements of value. Affects all claims.

Errors #330 through #339) A fourth principle of operation that Bielinski teaches and relies on is that analyses of cash flow only require consideration of the factors that can be used to calculate an actual cash flow. By way of contrast, the claimed invention teaches and relies on the fact that elements of value may have an indirect and/or non linear impact on cash flow and/or a category valuation. The fourth principle of operation would have to be changed to add a consideration of the factors that have an indirect and/or non-linear relationship to cash flow to the analysis method taught by Bielinski.

Because the required modification of Bielinski would change four of its principles of operation, the prima facie case of obviousness cannot be properly made.

**Errors 340 through 369** - Errors in the claims rejections caused by the failure to acknowledge that principles of operation of the Baur, Bigus and Lyons inventions would have to be changed to replicate the functionality of the claimed invention, include:

Errors #340 through #349) One principle of operation Baur relies on is that investor sentiment is a factor that may have an impact on share prices. This principle of operation would have to be changed to replicate the functionality of the claimed invention and



recognize the fact that enterprise value includes a number of categories of value (i.e. real options, market sentiment) and that market sentiment is a category of value with a value that is a function of element of value performance (see Evidence Appendix, pages 111 - 114). Affects all claims.

Errors #350 through #359) One principle of operation that Bigus relies on is that agents or program modules are selected in order to optimize the performance of computer tasks (see Bigus, abstract). This principle of operation would have to be change to replicate the functionality of the claimed invention that selects a set of changes that will optimize financial performance. Another principle of operation that Bigus relies on is the identification and exclusive use of the one best agent or module (see Bigus Column 8, Line 14) from a plurality of agents or modules. This principle of operation would also have to be changed to replicate the functionality of the claimed invention and recognize the fact that a plurality of agents (or bots) for performing the same function in alternate manners are in continual use. Affects all claims.

Errors #360 through #369) One principle of operation that Lyons relies on is that each user is free to define the terms used in the reports created with the support of the Lyons invention. In particular, Lyons teaches that each user is free to define the terms used in financial reports (see Lyons, Column 8, Lines 64 and 65 and Column 9, Line 13) at any point in the report definition process. By way of contrast, the claimed invention teaches and relies on the use of a single common definition for all the aspects of financial performance being analyzed. Changing Lyons to rely on the claimed use of common definitions would be a change in the principle of operation of the Lyon's invention. Affects all claims.

Because the required modification of Baur, Bigus and Lyons would change one or more of their principles of operation, the prima facie case of obviousness cannot be properly made.

**Errors 370 through 389** - It is well established that *when a modification of a reference destroys the intent, purpose or function of an invention such a proposed modification is not proper and the prima facie cause of obviousness cannot be properly made (In re Gordon 733 F.2d 900, 221 U.S.PQ 1125 Fed Circuit 1984)*. Errors in the claims rejections caused by the failure to acknowledge that the functionality of the Bielinski invention would be destroyed if it was modified to replicate the functionality of the claimed invention, include:

Errors #370 through #379) The claimed computational model of enterprise market value by element of value and category of value comprises predictive models up to two categories

of value, the current operation and/or market sentiment categories of value. Bielinski teaches a method that relies on a single tree of equations to identify the inputs that are related to the actual amount of enterprise cash flow, calculate the cash flow and calculate an enterprise value. Modifying the Bielinski invention to use a predictive model that completes a statistical analysis for all or part of the tree would destroy its ability to perform its intended function by a) producing non linear combinations of data inputs. As discussed previously, the Bielinski model relies on linear, mathematical combinations of inputs. As is well known to those of average skill in the art, neural networks generally produce outputs that are the product of a non-linear combination of inputs and b) replacing the equations of actual numbers with statistical relationships (see Evidence Appendix, pages 115 - 119).

It should be noted that if the Bielinski tree were not modified to use a predictive model, then it would not be able to replicate any of the functionality of the claimed invention. Because the required modification of Bielinski would destroy its ability to perform its intended function, the prima facie case of obviousness cannot be properly made. Affects all claims

Errors #380 through #389) Failure to provide any evidence to support assertions that the modifications to Bielinski required to replicate the claimed invention would not destroy its functionality. After additional evidence documenting the fact that the invention described by Bielinski would be destroyed by the modifications required to replicate the claimed functionality, the Examiner changed the assertion regarding the Bielinski document to state that it somehow taught other versions of Value Based Management that would not be destroyed by the required modifications. Evidence that Bielinski teaches an invention that would be destroyed by the required modifications include:

- a) the Bielinski document which specifically states that the Value Based Management method it teaches relies on SVA principles,
- b) Shareholder Value Analysis by Alfred Rappaport which teaches a tree based analysis of cash flow (see related proceedings for acknowledgement of this fact),
- c) the declaration under Rule 132 provided by Dr. Brous (see Evidence Appendix, pages 120 - 122),
- d) "What is Value Based Management:" by Thomas Koller, one of the inventors of VBM,
- e) the declaration under Rule 132 provided by Dr. Rauenzahn (see Evidence Appendix, pages 115 - 119), and
- f) the Hasendoncks reference.

Because the required modifications of Bielinski would destroy its ability to complete its intended

function, the prima facie case of obviousness cannot be properly made. Affects all claims.

**Error #390** - It is well established that *when a modification of a reference destroys the intent, purpose or function of an invention such a proposed modification is not proper and the prima facie cause of obviousness cannot be properly made (In re Gordon 733 F.2d 900, 221 U.S.PQ 1125 Fed Circuit 1984)*. The function of the Bigus invention is to use objective criteria to select between a plurality of agents or between a plurality of program modules. Program modules may have duplicate functionality that is implemented in alternate manners. In accordance with the Bigus invention when alternatives are available for completing the same function only one alternative for completing the function may be selected (see Bigus, Column 8, Line 14). By way of contrast, the claimed invention creates a plurality of agents (or bots) with duplicate functionality implemented in alternate manners and continually uses the best set of results from all of the different agents. Modifying the Bigus invention to replicate the functionality of the claimed invention would destroy its ability to perform its intended function and purpose of objectively selecting the one best alternative. Because the required modification of the Bigus invention would destroy its intended function and purpose, the prima facie case of obviousness cannot be properly made. Affects claim 40.

**Error #391** - It is well established that *when a modification of a reference destroys the intent, purpose or function of an invention such a proposed modification is not proper and the prima facie cause of obviousness cannot be properly made (In re Gordon 733 F.2d 900, 221 U.S.PQ 1125 Fed Circuit 1984)*. The function of the Lyons invention is to collect, organize, manage and consolidate financial data and provide user defined capabilities for creating financial and corporate reports (see Lyons, Abstract, second sentence). Lyons does this by providing each user with the ability to define all the terms that will be used in his or her reports and the input templates which are used to import data (see Lyons, Column 8, Line 24 through Column 10, Line 25). Using a “common definition” (aka common schema) to integrate data would destroy the ability of the Lyons invention to perform its intended function of enabling each user to define and create financial reports using the definitions they want to use. Because the required modification of the Lyons invention would destroy its intended function and purpose, the prima facie case of obviousness cannot be properly made. Affects claim 44.

**Errors 392 through 431** – The claim rejections are based on 35 U.S.C. §103(a) which states: *A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title [35 USC 102], if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to*

*which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.* Errors in the claim rejections caused by the apparent failure to meet any of the statutory requirements for claim rejection include:

Errors #392 through #401) Failure to acknowledge the fact that the cited documents fail to teach or suggest the subject matter as whole. As illustrated by the preceding discussion, the obviousness rejections appear to be based of a non-existent standard for obviousness “mentions the same word as another document” instead of “teaches or suggests the subject matter as a whole” as there is no aspect of the rejected claims that is taught or suggested by the cited documents. It is also well established that the *“Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art.” In re Lowry, 32 F.3d 1579, 1582 (Fed. Cir. 1994).* As detailed under errors 1 through 391, it does not appear that any of the claim limitations were actually considered. Affects all claims.

Errors #402 through #411) Failure to acknowledge the fact that the claim rejections have been authored by an individual(s) who appears to lack the level of skill in the art required to author such rejections. It is well established that the *“hypothetical ‘person having ordinary skill in the art’ to which the claimed subject matter pertains would, of necessity have the capability of understanding the scientific and engineering principles applicable to the pertinent art” Ex parte Hiyamizu, 10 USPQ2d 1393, 1394 (Bd. Pat. App. & Inter. 1988).* It is unlikely that anyone who understood the scientific and engineering principles applicable to the pertinent art would ever suggest Baur, Bielinski, Bigus, or Lyons as a reference in support of an obviousness rejection for the claimed inventions for the reasons described previously under errors 1 through 401. Affects all claims.

Errors #412 through #421) Failure to acknowledge the fact that the claim rejections are based on apparent misrepresentations regarding the teachings of the cited documents. This apparent misrepresentation may be a product of the fact that the Examiner does not appear to have the requisite level of skill in the relevant arts (see Errors #402 through #411). Affects all claims.

Errors #422 through #431) Failure to acknowledge the particular meaning given to the terms “element of value” and “value driver”. It is well established that *“words of the claim are generally given their ordinary and customary meaning, unless it appears from the written description that they were used differently by the applicant. See Teleflex Inc. v. Ficosa North America Corp., 299 F.3d 1313, 1325, 63 USPQ2d 1374, 1381 (Fed. Cir.*

2002), *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342, 60 USPQ2d 1851, 1854 (Fed. Cir. 2001) and MPEP § 2111.01. The term “element of value” was given a particular meaning (see lines 8 through 10 on page 19 of the specification) and the term “value driver” was also given a particular meaning in the written description (see lines 4 through 7 on page 54 of the specification). Affects all claims.

**Errors 432 through 441** – *The Supreme Court in KSR noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court quoting In re Kahn 41 stated that “[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness (KSR, 550 U.S. at 1, 82 USPQ2d at 1396).”* In spite of this well known requirement, the Examiner has not provided the required explanation. In particular, the Examiner has not explained what would motivate someone of average skill in the art to destroy the functionality of the Bielinski, Bigus and Lyons inventions and modify the principle of operation of all the references as discussed under errors 300 through 391. This explanation is particularly important when one considers that the cited documents teach away from all claimed methods and/or fail to teach or suggest almost every claim limitation as discussed under errors 1 through 299. In place of an explanation with articulated reasoning and a rational underpinning the Examiner has reached a conclusion of obviousness on the basis of conclusory statements supported by several hundred errors in the facts and the law. Errors in the law include those identified under errors 392 through 431. Because no rational underpinning has been provided to support the legal conclusion of obviousness, the prima facie case of obviousness cannot be properly established.

**Errors 442 through 461** – In *Dickinson v. Zurko*, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of U.S.P.T.O. findings are the standards set forth in the Administrative Procedure Act (“APA”) at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. Errors in the claim rejections caused by the apparent failure to meet any of the requirements of the APA include:

Errors #442 through #451) Failure to acknowledge the fact that the claim rejections fail under the substantial evidence standard. Errors 1 through 441 clearly show that the relevant Office Action fails to provide even a scintilla of evidence to support the obviousness rejections of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45 and that as a result the rejections fail to meet the

substantial evidence standard.

Errors #452 through #461) Failure to acknowledge the fact that the claim rejections fail under the arbitrary and capricious standard. The Appellant respectfully submits that the obviousness rejection of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44 and claim 45 also fails to pass the arbitrary and capricious test for a number of reasons including the fact that:

- a) as detailed above, the references cited by the Examiner provide substantial evidence of novelty, non-obviousness and newness of the rejected claims (see errors 1 through 391);
- b) there is no rational connection between the statutory requirements for an obviousness rejection, the agency fact findings and the rejection of the claims (see errors 392 through 431),
- c) no rational underpinning has been provided to support the legal conclusion of obviousness (see error 432 through 441), and
- d) prior agency fact-findings have shown that 35 U.S.C. 103 requirements for non-obviousness are apparently not always considered during the prosecution and allowance of large company patent applications. This apparently unequal application of the law comprises an apparent violation of 35 USC 3.

Because the claim rejections do not meet either standard of the APA, the prima facie case of obviousness cannot be properly established.

Summarizing the above, the Appellant respectfully submits that the Examiner has failed to produce the evidence required to satisfy the requirements of the APA and/or establish a prima facie case of obviousness for a single claim. These failures provide additional evidence that the claimed invention is new, novel and non-obvious.

**Issue 2 – Whether claim 55, claim 58, claim 59, claim 60, claim 61, claim 62 and claim 63 are patentable under 35 USC §103(a) over Bielinski) alone, in view of Baur, in view of Baur and Bigus or in view of Baur and Lyons?**

The claims are patentable because the claim rejections are based on three hundred six (306) errors in the facts and in the law. Because of these errors, the cited combination of teachings (Bielinski, Baur, Bigus and Lyons) and the arguments related to the cited combination of teachings fail to establish a prima facie case of obviousness for every rejected claim as detailed below.

**Errors 1 through 86** – It is well established that: “*in determining the difference between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious but whether the claimed invention as a whole would have been obvious (Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983)).*” Furthermore, it is well established that: *A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).* Errors in the claim rejections caused by the apparent failure to acknowledge the fact that all the cited references teach away from the invention described in claim 55, claim 58, claim 59, claim 60, claim 61, claim 62 and claim 63 include:

**Errors #1 through #7)** A failure to acknowledge that Bielinski teaches away from the claimed method of analyzing and modeling enterprise financial performance by category of value. Bielinski, which is the primary reference for all obviousness rejections, teaches and relies on the VBM method of discounted cash flow modeling. VBM uses Shareholder Value Analysis (hereinafter, SVA) principles, including a tree based model of cash flow, but advances the technique by using historical data, operations linked value drivers and concurrent changes in multiple value drivers. In accordance with the VBM/SVA method, most of the tree is used for calculating the actual cash flow for prior periods. The remainder of the tree is used for determining the cost of capital used to discount the cash flow. Putting the two parts of the tree together, the VBM method teaches that the only way to increase enterprise value is to increase the value of period cash flow (see Bielinski and Evidence Appendix, pages 120 – 122). By way of contrast, the claimed invention teaches that as many as three categories of value determine the value of an enterprise as shown in the table below.

Categories of value per 09/764,068	Categories of value per Bielinski
1. Current operation (cash flow), 2. Market sentiment, and 3. Real options.	1. Cash flow (current operation)

By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 55, claim 58, claim 59, claim 60, claim 61, claim 62 and claim 63.

**Errors #8 through #14)** A failure to acknowledge that Baur teaches away from the claimed method of analyzing and modeling enterprise financial performance by category of value. Baur focuses exclusively on the correlation between investor sentiment and weekly price

changes for the stocks included in the S&P 500 index. As is well known in the art, share prices reflect the combined value of all the categories of value in an enterprise. In particular, Baur teaches that investor sentiment is an external factor that affects share prices (and all the categories of value) instead of being a separate category of value that has a value that is a function of element of value performance as claimed. By exclusively teaching methods that teach away from the claimed invention, Baur provides additional evidence of the novelty, non-obviousness and newness of claim 55, claim 58, claim 59, claim 60, claim 61, claim 62 and claim 63.

Errors #15 through #21) A failure to acknowledge that Lyons teaches away from the claimed method of analyzing and modeling enterprise financial performance by category of value. Lyons teaching modeling financial performance by manipulating traditional financial schedule information. As is well known in the art, traditional financial schedules exclude two of the three categories of value. In particular, Baur teaches that investor sentiment is an external factor that affects share prices instead of being a separate category of value that has a value that is a function of element of value performance. By exclusively teaching methods that teach away from the claimed invention, Lyons provides additional evidence of the novelty, non-obviousness and newness of claim 55, claim 58, claim 59, claim 60, claim 61, claim 62 and claim 63.

Errors #22 through #28) A failure to acknowledge that Bielinski teaches away from the claimed analysis and modeling of enterprise financial performance by element of value. Bielinski teaches VBM that relies on SVA principles (including the use of a single tree of equations) to calculate an enterprise value from historical cash flow. The portion of the tree used for calculating historical cash flow is built by joining together a series of nodes where the inputs to each node are mathematically combined to produce a node output that becomes an input to a node at a higher level in the tree. The inputs to the VBM/SVA cash flow tree consist of: activity measures (i.e. volume of calls received, number of transactions completed and pounds of material used), counts (i.e. number of service delivery centers and number of employees), expenditure data (i.e. material costs, employee annual salary and cost per station), and summary financial measures (i.e. inventory turnover ratio and sales growth rate). These inputs mathematically combine to produce the summary accounting numbers used for calculating the historical cash flow. None of the VBM inputs teach or suggest an “element of value” as defined in the written description.



By way of contrast, the claimed invention teaches that elements of value drive current operation cash flow and the other categories of value and that statistical summaries of element of value performance are the only inputs to the models of each category of value – including the current operation.

Aspect of financial performance	Designation per 09/764,068	Designation per Bielinski
Raw material cost	Sub-component of expense value	Operational value driver
Production labor cost	Sub-component of expense value	Operational value driver

Consistent with the different teachings regarding the drivers of enterprise financial performance, Bielinski teaches a different definition of the term “value driver” and defines sub-components of expense value as operational value drivers (see Table). By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 55, claim 58, claim 59, claim 60, claim 61, claim 62 and claim 63.

Errors #29 through #35) A failure to acknowledge that Bielinski teaches away from the claimed multivariate statistical analysis of enterprise financial performance. Bielinski teaches a method that calculates the actual amount of enterprise cash flow (see Bielinski, Table 1). By teaching a reliance on actual numbers, Bielinski teaches away from the claimed multivariate statistical analysis. By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 55, claim 58, claim 59, claim 60, claim 61, claim 62 and claim 63.

Errors #36 through #42) A failure to acknowledge that Bielinski teaches away from analyzing employees and processes as elements of value that contribute to the value of one or more categories of value. Contrary to the statement made in the March 31, 2009 Office Action, Bielinski does not teach the analysis of alliances, employee, partners, processes and/or vendors as elements of value (or anything of the listed elements of value). None of these elements of value are mentioned or suggested in the Bielinski document. Bielinski does mention human resource costs, material costs and scrap costs and as such teaches that human resources and processes that use materials are liabilities that should be minimized and not elements of value contribute to the value of the categories of value. By exclusively teaching methods that teach away from the claimed

invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 55, claim 58, claim 59, claim 60, claim 61, claim 62 and claim 63.

Errors #43 through #49) A failure to acknowledge that Bielinski teaches away from the claimed method of analyzing enterprise financial performance by teaching and relying on different assumptions regarding the relationship between input values and cash flow value. Bielinski teaches that inputs have a linear relationship to the value of cash flow. By way of contrast, the claimed invention teaches that inputs may have a linear or non-linear effect on the value of the categories of value. By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 55, claim 58, claim 59, claim 60, claim 61, claim 62 and claim 63.

Errors #50 through #56) A failure to acknowledge that Bielinski teaches away from the claimed method of analyzing enterprise financial performance by teaching and relying on different assumptions regarding market efficiency. In accordance with SVA principles, Bielinski teaches that the market is strong form, efficient (aka standard valuation model) and that market sentiment value is zero. By way of contrast, the claimed invention does not make any assumptions about market efficiency. Accordingly, the market may be strong form, efficient (market sentiment value is zero) or it may be inefficient (market sentiment value may be above or below zero). By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 55, claim 58, claim 59, claim 60, claim 61, claim 62 and claim 63.

Errors #57 through #63) A failure to acknowledge that Lyons teaches away from the claimed analysis of element of value contribution to the value of one or more categories of value. Lyons focuses exclusively on manipulating traditional financial statements which (as is well known in the art) rely on the book value of assets instead of valuing an asset based on its contribution to one or more categories of value. Furthermore, traditional financial statements exclude many if not all of the claimed elements of value: alliances, brands, channels, customers, employees, intellectual property, partnerships, processes and vendors. By exclusively teaching methods that teach away from the claimed invention, Lyons provides additional evidence of the novelty, non-obviousness and newness of claim 55, claim 58, claim 59, claim 60, claim 61, claim 62 and claim 63.

Errors #64 through #70) A failure to acknowledge that Baur teaches away from the

claimed analysis of element of value contribution to the value of one or more categories of value. Baur focuses exclusively on the correlation between investor sentiment and weekly price changes for the S&P 500 (see Evidence Appendix, pages 111 - 114). Share prices reflect the combined contribution of all the elements of value in an enterprise. In particular, Baur teaches that external factors such as investor sentiment affect share prices (and all the categories of value). By way of contrast, the claimed invention teaches that the elements of value affect the categories of value and share prices. By exclusively teaching methods that teach away from the claimed invention, Baur provides additional evidence of the novelty, non-obviousness and newness of claim 55, claim 58, claim 59, claim 60, claim 61, claim 62 and claim 63.

Errors #71 through #77) A failure to acknowledge that Lyons teaches away from the claimed method of preparing data. Lyons describes an invention that allows each user to define and produce financial reports. In particular, each user is free to define the terms used in the financial reports (see Lyons, Column 8, Lines 64 and 65 and Column 9, Line 13) at any point in the report definition process. By way of contrast, the claimed invention teaches and relies on the use of a single common definition for all the aspects of financial performance being analyzed. By exclusively teaching methods that teach away from the claimed invention, Lyons provides additional evidence of the novelty, non-obviousness and newness of claim 55, claim 58, claim 59, claim 60, claim 61, claim 62 and claim 63.

Errors #78 through #84) A failure to acknowledge that Bielinski teaches away from the claimed method of quantifying a future enterprise market value. Bielinski teaches away from the use of projections that are required for a future value optimization analysis by teaching a strict reliance on five years of historical cash flow. Bielinski also teaches away from the claimed optimization analysis method as discussed under errors 111 and 112. By way of contrast, the claimed invention teaches the use of forecasts (aka projections) as part of a market value optimization analysis. By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 55, claim 58, claim 59, claim 60, claim 61, claim 62 and claim 63.

Errors #85 through #91) A failure to acknowledge that Bigus teaches away from the claimed causal models and the claimed method of optimizing an enterprise value. The purpose of the Bigus invention is to optimize the performance of a computer tasks that utilize non-causal models by selecting the single best agent for the task. By way of

contrast, the claimed invention teaches and relies on the use of causal models and optimization analyses to identify the most valuable set of changes in a business operation. By exclusively teaching methods that teach away from the claimed invention, Bigus provides additional evidence of the novelty, non-obviousness and newness of claim 55, claim 58, claim 59, claim 60, claim 61, claim 62 and claim 63.

Error #92) A failure to acknowledge that Bielinski teaches away from the claimed method of optimizing an enterprise value. Bielinski teaches the use of sensitivity analysis and break even analysis to identify desirable changes in operation (see Bielinski, Table 2 and Table 3). By way of contrast, the claimed invention teaches and relies on the use of optimization analyses to identify the most valuable set of changes in a business operation. By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 63.

Because the cited documents all exclusively teach methods that teach away from the claimed methods, the prima facie case of obviousness cannot be properly established.

**Errors 93 through 193** – It is well established that *“when determining whether a claim is obvious, an examiner must make ‘a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art.’ In re Ochiai, 71 F.3d 1565, 1572 (Fed. Cir. 1995). Thus, ‘obviousness requires a suggestion of all limitations in a claim.’ CFMT, Inc. v. Yieldup Intern. Corp., 349 F.3d 1333, 1342 (Fed. Cir. 2003) (citing In re Royka, 490 F.2d 981, 985 (CCPA 1974)) Furthermore, the Board of Patent Appeal and Interferences recently confirmed (In re Wada and Murphy, Appeal No. 2007- 3733) that a proper, post KSR obviousness determination still requires that an examiner must make “a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art.” In re Ochiai, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (emphasis added).* In other words, obviousness still requires a suggestion of all the limitations in a claim. Errors in the claim rejections caused by the apparent failure to acknowledge the fact that the cited documents do not teach one or more limitations of the claimed invention include:

Errors #93 through #183) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 55 (affects claims 58, 59, 60, 61, 62, and 63), including:

- a) *transforming at least a portion of the data into a causal model of each of one or more categories of an organization value (#93 through #99),*
- b) *transforming at least a portion of the data into a causal model of each of one or more*

*categories of an organization value that calculate and output a tangible value contribution of each of one or more elements of value to a future market value (#100 through #106),*

*c) transforming at least a portion of the data into a causal model of each of one or more categories of an organization value that calculate and output a tangible value contribution of each of one or more elements of value to each of the categories of organization value (#107 through #113),*

*d) categories of value are selected from the group consisting of real option, market sentiment and combinations thereof (#114 through #120),*

*e) alliance elements of value (#121 through #127),*

*f) brand elements of value (#128 through #134),*

*g) channel elements of value (#135 through #141),*

*h) customer elements of value (#142 through #148),*

*i) employee elements of value (#149 through #155),*

*j) intellectual property elements of value (#156 through #162),*

*k) partnership elements of value (#163 through #169),*

*l) process elements of value (#170 through #176), and*

*m) vendor elements of value (#177 through #183).*

Error #184) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 58, including: *where a net contribution for each of one or more elements of value to each of one or more categories of value further comprises a direct element contribution to a category of value net of any element impacts on other elements of value within said category of value.*

Errors #185 through #190) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 59, including:

*a) predictive component of value models, (#185),*

*b) predictive market value models (#186),*

*c) relative element strength models, (#187),*

*d) real option valuation models, (#188),*

*e) real option discount rate models, (#189),*

*f) market sentiment models (#190).*

Error #191) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 60, including: *where a net contribution for each of one or more elements of value further comprises a direct contribution to a value of a*

*category of value net of any impact on other elements of value.*

Error #192) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 62, including: *where the future market value portion of organization market value further comprises a summation of values selected from the group consisting of the real option value, the portion of current operation value caused by elements of value, the portion of market sentiment value caused by elements of value and combinations thereof.*

Error #193) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 63, including: *where the value driver changes that will optimize future market value are identified by algorithms selected from the group consisting of monte carlo algorithms, genetic algorithms, multi criteria optimization algorithms and combinations thereof.*

**Errors 194 through 221** - It is well established that when “*the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)*”. Errors in the claims rejections caused by the failure to acknowledge that principles of operation of the Bielinski invention would have to be changed to replicate the functionality of the claimed invention, include:

Errors #194 through #200) One principle of operation Bielinski relies on is the standard model which teaches that cash flow is the sole determinant of enterprise value. This principle of operation would have to be changed to replicate the functionality of the claimed invention and recognize the fact that enterprise value includes a number of categories of value (i.e. real options, market sentiment) that are not included in the standard model (see Evidence Appendix, pages 120 - 122). Affects all claims.

Errors #201 through #207) A second principle of operation that Bielinski relies on is the use of the actual prior period cash flow to calculate an enterprise value (see Bielinski, Table 1 and Evidence Appendix, pages 120 - 122). This principle of operation would have to be changed to replicate the functionality of the claimed inventions because the claimed inventions rely on a series of multivariate statistical analyses where the only inputs are element of value impact summaries and the primary outputs are between one and zero (category valuations are determined separately). Changing to a series of analyses using statistical models for identifying relative contributions and separate models for calculating

segment valuations would be a change in another principle of operation of the Bielinski invention. Affects all claims.

Errors #208 through #214) A third principle of operation that Bielinski teaches and relies on is that activities, counts, expenditures and summary measures determine cash flow and that value drivers are high level summaries of enterprise financial performance (i.e. operating profit margin). Bielinski also teaches that operational value drivers are sub-components of expense value (i.e. raw material cost, human resource cost), and/or summary financial statistics (inventory turnover and sales growth percentage). This principle of operation would have to be changed to replicate the functionality of the claimed inventions because the claimed inventions teach and rely on the fact that elements of value drive cash flow (and other segments of value) and that value drivers are characteristics of elements of value. Affects all claims.

Errors #215 through #221) A fourth principle of operation that Bielinski teaches and relies on is that analyses of cash flow only require consideration of the factors that can be used to calculate an actual cash flow. By way of contrast, the claimed invention teaches and relies on the fact that elements of value may have an indirect and/or non linear impact on cash flow and/or a category valuation. The fourth principle of operation would have to be changed to add a consideration of the factors that have an indirect and/or non-linear relationship to cash flow to the analysis method taught by Bielinski.

Because the required modification of Bielinski would change four of its principles of operation, the prima facie case of obviousness cannot be properly made.

**Errors 222 through 242** - Errors in the claims rejections caused by the failure to acknowledge that principles of operation of the Baur, Bigus and Lyons inventions would have to be changed to replicate the functionality of the claimed invention, include:

Errors #222 through #228) One principle of operation Baur relies on is that investor sentiment is a factor that may have an impact on share prices. This principle of operation would have to be changed to replicate the functionality of the claimed invention and recognize the fact that enterprise value includes a number of categories of value (i.e. real options, market sentiment) and that market sentiment is a category of value with a value that is a function of element of value performance (see Evidence Appendix, pages 111 - 114). Affects all claims.

Errors #229 through #235) One principle of operation that Bigus relies on is that agents use

non causal models to perform computer tasks (see Bigus, abstract). This principle of operation would have to be change to replicate the functionality of the claimed invention that relies on causal models. Another principle of operation that Bigus relies on is the identification and exclusive use of the one best agent or module (see Bigus Column 8, Line 14) from a plurality of agents or modules. This principle of operation would also have to be changed to replicate the functionality of the claimed invention and recognize the fact that a plurality of agents (or bots) for performing the same function in alternate manners are in continual use. Affects all claims.

Errors #236 through #242) One principle of operation that Lyons relies on is that each user is free to define the terms used in the reports created with the support of the Lyons invention. In particular, Lyons teaches that each user is free to define the terms used in financial reports (see Lyons, Column 8, Lines 64 and 65 and Column 9, Line 13) at any point in the report definition process. By way of contrast, the claimed invention teaches and relies on the use of a single common definition for all the aspects of financial performance being analyzed. Changing Lyons to rely on the claimed use of common definitions would be a change in the principle of operation of the Lyon's invention. Affects all claims.

Because the required modification of Baur, Bigus and Lyons would change one or more of their principles of operation, the prima facie case of obviousness cannot be properly made.

**Errors 243 through 256** - It is well established that *when a modification of a reference destroys the intent, purpose or function of an invention such a proposed modification is not proper and the prima facie cause of obviousness cannot be properly made (In re Gordon 733 F.2d 900, 221 U.S.PQ 1125 Fed Circuit 1984)*. Errors in the claims rejections caused by the failure to acknowledge that the functionality of the Bielinski invention would be destroyed if it was modified to replicate the functionality of the claimed invention, include:

Errors #243 through #249) The claimed computational model of enterprise market value by element of value and category of value comprises predictive models up to two categories of value, the current operation and/or market sentiment categories of value. Bielinski teaches a method that relies on a single tree of equations to identify the inputs that are related to the actual amount of enterprise cash flow, calculate the cash flow and calculate an enterprise value. Modifying the Bielinski invention to use a predictive model that completes a statistical analysis for all or part of the tree would destroy its ability to perform its intended function by: a) producing non-linear combinations of data inputs. As discussed



previously, the Bielinski model relies on linear, mathematical combinations of inputs. As is well known to those of average skill in the art, neural networks generally produce outputs that are the product of a non-linear combination of inputs and b) replacing the equations of actual numbers with statistical relationships (see Evidence Appendix, pages 115 - 119).

It should be noted that if the Bielinski tree were not modified to use a predictive model, then it would not be able to replicate any of the functionality of the claimed invention. Because the required modification of Bielinski would destroy its ability to perform its intended function, the prima facie case of obviousness cannot be properly made. Affects all claims

Errors #250 through #256) Failure to provide any evidence to support assertions that the modifications to Bielinski required to replicate the claimed invention would not destroy its functionality. After additional evidence documenting the fact that the invention described by Bielinski would be destroyed by the modifications required to replicate the claimed functionality, the Examiner changed the assertion regarding the Bielinski document to state that it somehow taught other versions of Value Based Management that would not be destroyed by the required modifications. Evidence that Bielinski teaches an invention that would be destroyed by the required modifications include:

- a) the Bielinski document which specifically states that the Value Based Management method it teaches relies on SVA principles,
- b) Shareholder Value Analysis by Alfred Rappaport which teaches a tree based analysis of cash flow (see related proceedings for acknowledgement of this fact),
- c) the declaration under Rule 132 provided by Dr. Brous (see Evidence Appendix, pages 120 - 122),
- d) "What is Value Based Management:" by Thomas Koller, one of the inventors of VBM,
- e) the declaration under Rule 132 provided by Dr. Rauenzahn (see Evidence Appendix, pages 115 - 119), and
- f) the Hasendoncks reference.

Because the required modifications of Bielinski would destroy its ability to complete its intended function, the prima facie case of obviousness cannot be properly made. Affects all claims.

**Errors 257 through 284** – The claim rejections are based on 35 U.S.C. §103(a) which states: *A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title [35 USC 102], if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to*

*which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.* Errors in the claim rejections caused by the apparent failure to meet any of the statutory requirements for claim rejection include:

Errors #257 through #263) Failure to acknowledge the fact that the cited documents fail to teach or suggest the subject matter as whole. As illustrated by the preceding discussion, the obviousness rejections appear to be based of a non-existent standard for obviousness “mentions the same word as another document” instead of “teaches or suggests the subject matter as a whole” as there is no aspect of the rejected claims that is taught or suggested by the cited documents. It is also well established that the *“Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art.” In re Lowry, 32 F.3d 1579, 1582 (Fed. Cir. 1994).* As detailed under errors 1 through 256, it does not appear that any of the claim limitations were actually considered. Affects all claims.

Errors #264 through #270) Failure to acknowledge the fact that the claim rejections have been authored by an individual(s) who appears to lack the level of skill in the art required to author such rejections. It is well established that the *“hypothetical ‘person having ordinary skill in the art’ to which the claimed subject matter pertains would, of necessity have the capability of understanding the scientific and engineering principles applicable to the pertinent art” Ex parte Hiyamizu, 10 USPQ2d 1393, 1394 (Bd. Pat. App. & Inter. 1988).* It is unlikely that anyone who understood the scientific and engineering principles applicable to the pertinent art would ever suggest Baur, Bielinski, Bigus, or Lyons as a reference in support of an obviousness rejection for the claimed inventions for the reasons described previously under errors 1 through 263. Affects all claims.

Errors #271 through #277) Failure to acknowledge the fact that the claim rejections are based on apparent misrepresentations regarding the teachings of the cited documents. This apparent misrepresentation may be a product of the fact that the Examiner does not appear to have the requisite level of skill in the relevant arts (see Errors #264 through #270). Affects all claims.

Errors #278 through #284) Failure to acknowledge the particular meaning given to the terms “element of value” and “value driver”. It is well established that *“words of the claim are generally given their ordinary and customary meaning, unless it appears from the written description that they were used differently by the applicant. See Teleflex Inc. v. Ficosa North America Corp., 299 F.3d 1313, 1325, 63 USPQ2d 1374, 1381 (Fed. Cir.*

2002), *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342, 60 USPQ2d 1851, 1854 (Fed. Cir. 2001), and MPEP § 2111.01. The term “element of value” was given a particular meaning (see lines 8 through 10 on page 19 of the specification) and the term “value driver” was also given a particular meaning in the written description (see lines 4 through 7 on page 54 of the specification). Affects all claims.

**Errors 285 through 291** – *The Supreme Court in KSR noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court quoting In re Kahn 41 stated that “[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness (KSR, 550 U.S. at 1, 82 USPQ2d at 1396).”* In spite of this well known requirement, the Examiner has not provided the required explanation. In particular, the Examiner has not explained what would motivate someone of average skill in the art to destroy the functionality of the Bielinski invention and modify the principle of operation of all the references as discussed under errors 194 through 256. This explanation is particularly important when one considers that the cited documents teach away from all claimed methods and/or fail to teach or suggest almost every claim limitation as discussed under errors 1 through 193. In place of an explanation with articulated reasoning and a rational underpinning the Examiner has reached a conclusion of obviousness on the basis of conclusory statements supported by several hundred errors in the facts and the law. Errors in the law include those identified under errors 257 through 284. Because no rational underpinning has been provided to support the legal conclusion of obviousness, the prima facie case of obviousness cannot be properly established.

**Errors 292 through 306** – In *Dickinson v. Zurko*, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of U.S.P.T.O. findings are the standards set forth in the Administrative Procedure Act (“APA”) at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. Errors in the claim rejections caused by the apparent failure to meet any of the requirements of the APA include:

Errors #292 through #299) Failure to acknowledge the fact that the claim rejections fail under the substantial evidence standard. Errors 1 through 291 clearly show that the relevant Office Action fails to provide even a scintilla of evidence to support the obviousness rejections of claim 55, claim 58, claim 59, claim 60, claim 61, claim 62 and claim 63 and that as a result the rejections fail to meet the substantial evidence standard.

Errors #300 through #306) Failure to acknowledge the fact that the claim rejections fail under the arbitrary and capricious standard. The Appellant respectfully submits that the obviousness rejection of claim 55, claim 58, claim 59, claim 60, claim 61, claim 62 and claim 63 also fails to pass the arbitrary and capricious test for a number of reasons including the fact that:

- a) as detailed above, the references cited by the Examiner provide substantial evidence of novelty, non-obviousness and newness of the rejected claims (see errors 1 through 256);
- b) there is no rational connection between the statutory requirements for an obviousness rejection, the agency fact findings and the rejection of the claims (see errors 257 through 284),
- c) no rational underpinning has been provided to support the legal conclusion of obviousness (see error 285 through 291), and
- d) prior agency fact-findings have shown that 35 U.S.C. 103 requirements for non-obviousness are apparently not always considered during the prosecution and allowance of large company patent applications. This apparently unequal application of the law comprises an apparent violation of 35 USC 3.

Because the claim rejections do not meet either standard of the APA, the prima facie case of obviousness cannot be properly established.

Summarizing the above, the Appellant respectfully submits that the Examiner has failed to produce the evidence required to satisfy the requirements of the APA and/or establish a prima facie case of obviousness for a single claim. These failures provide additional evidence that the claimed invention is new, novel and non-obvious.

**Issue 3 – Whether claim 72, claim 73, claim 74, claim 75 and claim 47 are patentable under 35 USC §103(a) over Bielinski) alone, in view of Baur, in view of Baur and Bigus or in view of Baur and Lyons?**

The claims are patentable because the claim rejections are based on one hundred eighty (180) errors in the facts and in the law. Because of these errors, the cited combination of teachings (Bielinski, Baur, Bigus and Lyons) and the arguments related to the cited combination of teachings fail to establish a prima facie case of obviousness for every rejected claim as detailed below.

**Errors 1 through 65** – It is well established that: *“in determining the difference between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences*

*themselves would have been obvious but whether the claimed invention as a whole would have been obvious (Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983)).” Furthermore, it is well established that: A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). Errors in the claim rejections caused by the apparent failure to acknowledge the fact that all the cited references teach away from the invention described in claim 72, claim 73, claim 74, claim 75 and claim 47 include:*

Errors #1 through #5) A failure to acknowledge that Bielinski teaches away from the claimed method of analyzing and modeling enterprise financial performance by category of value. Bielinski, which is the primary reference for all obviousness rejections, teaches and relies on the VBM method of discounted cash flow modeling. VBM uses Shareholder Value Analysis (hereinafter, SVA) principles, including a tree based model of cash flow, but advances the technique by using historical data, operations linked value drivers and concurrent changes in multiple value drivers. In accordance with the VBM/SVA method, most of the tree is used for calculating the actual cash flow for prior periods. The remainder of the tree is used for determining the cost of capital used to discount the cash flow. Putting the two parts of the tree together, the VBM method teaches that the only way to increase enterprise value is to increase the value of period cash flow (see Bielinski and Evidence Appendix, pages 115 – 122). By way of contrast, the claimed invention teaches that as many as three categories of value determine the value of an enterprise as shown in the table below.

Categories of value per 09/764,068	Categories of value per Bielinski
1. Current operation (cash flow), 2. Market sentiment, and 3. Real options.	1. Cash flow (current operation)

By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 72, claim 73, claim 74, claim 75 and claim 47.

Errors #6 through #10) A failure to acknowledge that Baur teaches away from the claimed method of analyzing and modeling enterprise financial performance by category of value. Baur focuses exclusively on the correlation between investor sentiment and weekly price changes for the stocks included in the S&P 500 index. As is well known in the art, share prices reflect the combined value of all the categories of value in an enterprise. In

particular, Baur teaches that investor sentiment is an external factor that affects share prices (and all the categories of value) instead of being a separate category of value that has a value that is a function of element of value performance as claimed. By exclusively teaching methods that teach away from the claimed invention, Baur provides additional evidence of the novelty, non-obviousness and newness of claim 72, claim 73, claim 74, claim 75 and claim 47.

Errors #11 through #15) A failure to acknowledge that Lyons teaches away from the claimed method of analyzing and modeling enterprise financial performance by category of value. Lyons teaching modeling financial performance by manipulating traditional financial schedule information. As is well known in the art, the traditional financial schedules Lyons relies on exclude two of the three categories of value. By exclusively teaching methods that teach away from the claimed invention, Lyons provides additional evidence of the novelty, non-obviousness and newness of claim 72, claim 73, claim 74, claim 75 and claim 47.

Errors #16 through #20) A failure to acknowledge that Bielinski teaches away from the claimed multivariate statistical analysis of enterprise financial performance. Bielinski teaches a method that calculates the actual amount of enterprise cash flow (see Bielinski, Table 1). By teaching a reliance on actual numbers, Bielinski teaches away from the claimed multivariate statistical analysis. By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 72, claim 73, claim 74, claim 75 and claim 47.

Errors #21 through #25) A failure to acknowledge that Bielinski teaches away from the claimed analysis and modeling of enterprise financial performance by element of value. Bielinski teaches VBM that relies on SVA principles (including the use of a single tree of equations) to calculate an enterprise value from historical cash flow. The portion of the tree used for calculating historical cash flow is built by joining together a series of nodes where the inputs to each node are mathematically combined to produce a node output that becomes an input to a node at a higher level in the tree. The inputs to the VBM/SVA cash flow tree consist of: activity measures (i.e. volume of calls received, number of transactions completed and pounds of material used), counts (i.e. number of service delivery centers and number of employees), expenditure data (i.e. material costs, employee annual salary and cost per station), and summary financial measures (i.e. inventory turnover ratio and sales growth rate) These inputs mathematically combine to produce the summary

accounting numbers used for calculating the historical cash flow. None of the VBM inputs teach or suggest an “element of value” as defined in the written description.

By way of contrast, the claimed invention teaches that elements of value drive current operation cash flow and the other categories of value and that statistical summaries of element of value performance are the only inputs to the models of each category of value – including the current operation.

Aspect of financial performance	Designation per 09/764,068	Designation per Bielinski
Raw material cost	Sub-component of expense value	Operational value driver
Production labor cost	Sub-component of expense value	Operational value driver

Consistent with the different teachings regarding the drivers of enterprise financial performance, Bielinski teaches a different definition of the term “value driver” and defines sub-components of expense value as operational value drivers (see Table). By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 72, claim 73, claim 74, claim 75 and claim 47.

Errors #26 through #30) A failure to acknowledge that Bielinski teaches away from analyzing employees and processes as elements of value that contribute to the value of one or more categories of value. Contrary to the statement made in the March 31, 2009 Office Action, Bielinski does not teach the analysis of alliances, employee, partners, processes and/or vendors as elements of value (or anything of the listed elements of value). None of these elements of value are mentioned or suggested in the Bielinski document. Bielinski does mention human resource costs, material costs and scrap costs and as such teaches that human resources and processes that use materials are liabilities that should be minimized and not elements of value contribute to the value of the categories of value. By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 72, claim 73, claim 74, claim 75 and claim 47.

Errors #31 through #35) A failure to acknowledge that Bielinski teaches away from the claimed method of analyzing enterprise financial performance by teaching and relying on different assumptions regarding the relationship between input values and cash flow value. Bielinski teaches that inputs have a linear relationship to the value of cash flow.

By way of contrast, the claimed invention teaches that inputs may have a linear or non-linear effect on the value of the categories of value. By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 72, claim 73, claim 74, claim 75 and claim 47.

Errors #36 through #40) A failure to acknowledge that Bielinski teaches away from the claimed method of analyzing enterprise financial performance by teaching and relying on different assumptions regarding market efficiency. In accordance with SVA principles, Bielinski teaches that the market is strong form, efficient (aka standard valuation model) and that market sentiment value is zero. By way of contrast, the claimed invention does not make any assumptions about market efficiency. Accordingly, the market may be strong form, efficient (market sentiment value is zero) or it may be inefficient (market sentiment value may be above or below zero). By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 72, claim 73, claim 74, claim 75 and claim 47.

Errors #41 through #45) A failure to acknowledge that Lyons teaches away from the claimed analysis of element of value contribution to the value of one or more categories of value. Lyons focuses exclusively on manipulating traditional financial statements which (as is well known in the art) rely on the book value of assets instead of valuing an asset based on its contribution to one or more categories of value. Furthermore, traditional financial statements exclude many if not all of the claimed elements of value: alliances, brands, channels, customers, employees, intellectual property, partnerships, processes and vendors. By exclusively teaching methods that teach away from the claimed invention, Lyons provides additional evidence of the novelty, non-obviousness and newness of claim 72, claim 73, claim 74, claim 75 and claim 47.

Errors #46 through #50) A failure to acknowledge that Baur teaches away from the claimed analysis of element of value contribution to the value of one or more categories of value. Baur focuses exclusively on the correlation between investor sentiment and weekly price changes for the S&P 500 (see Evidence Appendix, pages 111 - 114). Share prices reflect the combined contribution of all the elements of value in an enterprise. In particular, Baur teaches that external factors such as investor sentiment affect share prices (and all the categories of value). By way of contrast, the claimed invention teaches that the



elements of value affect the categories of value and share prices. By exclusively teaching methods that teach away from the claimed invention, Baur provides additional evidence of the novelty, non-obviousness and newness of claim 72, claim 73, claim 74, claim 75 and claim 47.

Errors #51 through #55) A failure to acknowledge that Lyons teaches away from the claimed method of preparing data. Lyons describes an invention that allows each user to define and produce financial reports. In particular, each user is free to define the terms used in the financial reports (see Lyons, Column 8, Lines 64 and 65 and Column 9, Line 13) at any point in the report definition process. By way of contrast, the claimed invention teaches and relies on the use of a single common definition for all the aspects of financial performance being analyzed. By exclusively teaching methods that teach away from the claimed invention, Lyons provides additional evidence of the novelty, non-obviousness and newness of claim 72, claim 73, claim 74, claim 75 and claim 47.

Errors #56 through #60) A failure to acknowledge that Bielinski teaches away from the claimed method of quantifying a future enterprise market value. Bielinski teaches away from the use of projections that are required for a future value optimization analysis by teaching a strict reliance on five years of historical cash flow. Bielinski also teaches away from the claimed optimization analysis method as discussed under errors 111 and 112. By way of contrast, the claimed invention teaches the use of forecasts (aka projections) as part of a market value optimization analysis. By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 72, claim 73, claim 74, claim 75 and claim 47.

Errors #61 through #65) A failure to acknowledge that Bigus teaches away from the claimed use of causal models. The purpose of the Bigus invention is to optimize the performance of a computer tasks that utilize non-causal models by selecting the single best agent for the task. By way of contrast, the claimed invention teaches and relies on the use of causal models for analyzing and managing a business operation using the best set of data. By exclusively teaching methods that teach away from the claimed invention, Bigus provides additional evidence of the novelty, non-obviousness and newness of claim 72, claim 73, claim 74, claim 75 and claim 47.

Because the cited documents all exclusively teach methods that teach away from the claimed methods, the prima facie case of obviousness cannot be properly established.

**Errors 66 through 100** – It is well established that *“when determining whether a claim is*

*obvious, an examiner must make ‘a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art.’ In re Ochiai, 71 F.3d 1565, 1572 (Fed. Cir. 1995). Thus, ‘obviousness requires a suggestion of all limitations in a claim.’ CFMT, Inc. v. Yieldup Intern. Corp., 349 F.3d 1333, 1342 (Fed. Cir. 2003) (citing In re Royka, 490 F.2d 981, 985 (CCPA 1974)) Furthermore, the Board of Patent Appeal and Interferences recently confirmed (In re Wada and Murphy, Appeal No. 2007- 3733) that a proper, post KSR obviousness determination still requires that an examiner must make “a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art.” In re Ochiai, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (emphasis added). In other words, obviousness still requires a suggestion of all the limitations in a claim. Errors in the claim rejections caused by the apparent failure to acknowledge the fact that the cited documents do not teach one or more limitations of the claimed invention include:*

Errors #66 through #81) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 72 (affects claims 73, 74 and 75), including:

- a) transforming at least a portion of the data into a causal model of each of one or more categories of an organization value (#66 through #69),*
- b) transforming at least a portion of the data into a model of each of one or more categories of an organization value that identify and output a tangible contribution of each of one or more elements of value to the categories of organization value (#70 through #73),*
- c) categories of value are selected from the group consisting of real option, market sentiment and combinations thereof (#74 through #77), and*
- d) using the tangible contribution for each element of value to identify a market value for each element of value (#78 through #81).*

Errors #82 through #99) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 47 and 75, including: *customers (#82 and #83) and elements of value selected from the group consisting of alliances (#84 and #85), brands(#86 and #87), channels (#88 and #89), employees (#90 and #91), intellectual property (#92 and #93), partnerships (#94 and #95), processes (#96 and #97) and vendors (#98 and #99).*

Error #100) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 74, including: *tracking a change in a value of*

*each of one or more elements of value over time, and including the calculated changes in value of each element of value in an income statement or a cash flow statement.*

**Errors 101 through 120** - It is well established that when “*the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)*”. Errors in the claims rejections caused by the failure to acknowledge that principles of operation of the Bielinski invention would have to be changed to replicate the functionality of the claimed invention, include:

Errors #101 through #105) One principle of operation Bielinski relies on is the standard model which teaches that cash flow is the sole determinant of enterprise value. This principle of operation would have to be changed to replicate the functionality of the claimed invention and recognize the fact that enterprise value includes a number of categories of value (i.e. real options, market sentiment) that are not included in the standard model (see Evidence Appendix, pages 115- 122). Affects all claims.

Errors #106 through #110) A second principle of operation that Bielinski relies on is the use of the actual prior period cash flow to calculate an enterprise value (see Bielinski, Table 1 and Evidence Appendix, pages 120 - 122). This principle of operation would have to be changed to replicate the functionality of the claimed inventions because the claimed inventions rely on a series of multivariate statistical analyses where the only inputs are element of value impact summaries and the primary outputs are between one and zero (category valuations are determined separately). Changing to a series of analyses using statistical models for identifying relative contributions and separate models for calculating segment valuations would be a change in another principle of operation of the Bielinski invention. Affects all claims.

Errors #111 through #115) A third principle of operation that Bielinski teaches and relies on is that activities, counts, expenditures and summary measures determine cash flow and that value drivers are high level summaries of enterprise financial performance (i.e. operating profit margin). Bielinski also teaches that operational value drivers are sub-components of expense value (i.e. raw material cost, human resource cost), and/or summary financial statistics (inventory turnover and sales growth percentage). This principle of operation would have to be changed to replicate the functionality of the claimed inventions because the claimed inventions teach and rely on the fact that elements of value drive cash flow (and other segments of value) and that value drivers are characteristics of

elements of value. Affects all claims.

Errors #116 through #120) A fourth principle of operation that Bielinski teaches and relies on is that analyses of cash flow only require consideration of the factors that can be used to calculate an actual cash flow. By way of contrast, the claimed invention teaches and relies on the fact that elements of value may have an indirect and/or non linear impact on cash flow and/or a category valuation. The fourth principle of operation would have to be changed to add a consideration of the factors that have an indirect and/or non-linear relationship to cash flow to the analysis method taught by Bielinski.

Because the required modification of Bielinski would change four of its principles of operation, the prima facie case of obviousness cannot be properly made.

**Errors 121 through 135** - Errors in the claims rejections caused by the failure to acknowledge that principles of operation of the Baur, Bigus and Lyons inventions would have to be changed to replicate the functionality of the claimed invention, include:

Errors #121 through #125) One principle of operation Baur relies on is that investor sentiment is a factor that may have an impact on share prices. This principle of operation would have to be changed to replicate the functionality of the claimed invention and recognize the fact that enterprise value includes a number of categories of value (i.e. real options, market sentiment) and that market sentiment is a category of value with a value that is a function of element of value performance (see Evidence Appendix, pages 111 – 114). Affects all claims.

Errors #126 through #130) One principle of operation that Bigus relies on is that agents use non causal models to perform computer tasks (see Bigus, abstract). This principle of operation would have to be change to replicate the functionality of the claimed invention that relies on causal models. Another principle of operation that Bigus relies on is the identification and exclusive use of the one best agent or module (see Bigus Column 8, Line 14) from a plurality of agents or modules. This principle of operation would also have to be changed to replicate the functionality of the claimed invention and recognize the fact that a plurality of agents (or bots) for performing the same function in alternate manners are in continual use. Affects all claims.

Errors #131 through #135) One principle of operation that Lyons relies on is that each user is free to define the terms used in the reports created with the support of the Lyons invention. In particular, Lyons teaches that each user is free to define the terms used in financial reports

(see Lyons, Column 8, Lines 64 and 65 and Column 9, Line 13) at any point in the report definition process. By way of contrast, the claimed invention teaches and relies on the use of a single common definition for all the aspects of financial performance being analyzed. Changing Lyons to rely on the claimed use of common definitions would be a change in the principle of operation of the Lyon's invention. Affects all claims.

Because the required modification of Baur, Bigus and Lyons would change one or more of their principles of operation, the prima facie case of obviousness cannot be properly made.

**Errors 136 through 145** - It is well established that *when a modification of a reference destroys the intent, purpose or function of an invention such a proposed modification is not proper and the prima facie cause of obviousness cannot be properly made (In re Gordon 733 F.2d 900, 221 U.S.P.Q 1125 Fed Circuit 1984)*. Errors in the claims rejections caused by the failure to acknowledge that the functionality of the Bielinski invention would be destroyed if it was modified to replicate the functionality of the claimed invention, include:

Errors #136 through #140) The claimed computational model of enterprise market value by element of value and category of value comprises predictive models up to two categories of value, the current operation and/or market sentiment categories of value. Bielinski teaches a method that relies on a single tree of equations to identify the inputs that are related to the actual amount of enterprise cash flow, calculate the cash flow and calculate an enterprise value. Modifying the Bielinski invention to use a predictive model that completes a statistical analysis for all or part of the tree would destroy its ability to perform its intended function by: a) producing non linear combinations of data inputs. As discussed previously, the Bielinski model relies on linear, mathematical combinations of inputs. As is well known to those of average skill in the art, neural networks generally produce outputs that are the product of a non-linear combination of inputs and b) replacing the equations of actual numbers with statistical relationships (see Evidence Appendix, pages 115 - 122).

It should be noted that if the Bielinski tree were not modified to use a predictive model, then it would not be able to replicate any of the functionality of the claimed invention. Because the required modification of Bielinski would destroy its ability to perform its intended function, the prima facie case of obviousness cannot be properly made. Affects all claims

Errors #141 through #145) Failure to provide any evidence to support assertions that the modifications to Bielinski required to replicate the claimed invention would not destroy its functionality. After additional evidence documenting the fact that the invention described by

Bielinski would be destroyed by the modifications required to replicate the claimed functionality, the Examiner changed the assertion regarding the Bielinski document to state that it somehow taught other versions of Value Based Management that would not be destroyed by the required modifications. Evidence that Bielinski teaches an invention that would be destroyed by the required modifications includes:

- a) the Bielinski document which specifically states that the Value Based Management method it teaches relies on SVA principles,
- b) Shareholder Value Analysis by Alfred Rappaport which teaches a tree based analysis of cash flow (see related proceedings for acknowledgement of this fact),
- c) the declaration under Rule 132 provided by Dr. Brous (see Evidence Appendix, pages 120 - 122),
- d) "What is Value Based Management:" by Thomas Koller, one of the inventors of VBM,
- e) the declaration under Rule 132 provided by Dr. Rauenzahn (see Evidence Appendix, pages 115 - 119), and
- f) the Hasendoncks reference.

Because the required modifications of Bielinski would destroy its ability to complete its intended function, the prima facie case of obviousness cannot be properly made. Affects all claims.

**Errors 146 through 165** – The claim rejections are based on 35 U.S.C. §103(a) which states: *A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title [35 USC 102], if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.* Errors in the claim rejections caused by the apparent failure to meet any of the statutory requirements for claim rejection include:

Errors #146 through #150) Failure to acknowledge the fact that the cited documents fail to teach or suggest the subject matter as whole. As illustrated by the preceding discussion, the obviousness rejections appear to be based of a non-existent standard for obviousness "mentions the same word as another document" instead of "teaches or suggests the subject matter as a whole" as there is no aspect of the rejected claims that is taught or suggested by the cited documents. It is also well established that the *"Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability*

of an invention over the prior art.” *In re Lowry*, 32 F.3d 1579, 1582 (Fed. Cir. 1994). As detailed under errors 1 through 145, it does not appear that any of the claim limitations were actually considered.

Errors #151 through #155) Failure to acknowledge the fact that the claim rejections have been authored by an individual(s) who appears to lack the level of skill in the art required to author such rejections. It is well established that the “*hypothetical ‘person having ordinary skill in the art’ to which the claimed subject matter pertains would, of necessity have the capability of understanding the scientific and engineering principles applicable to the pertinent art*” *Ex parte Hiyamizu*, 10 USPQ2d 1393, 1394 (Bd. Pat. App. & Inter. 1988). It is unlikely that anyone who understood the scientific and engineering principles applicable to the pertinent art would ever suggest Baur, Bielinski, Bigus, or Lyons as a reference in support of an obviousness rejection for the claimed inventions for the reasons described previously under errors 1 through 150.

Errors #156 through #160) Failure to acknowledge the fact that the claim rejections are based on apparent misrepresentations regarding the teachings of the cited documents. This apparent misrepresentation may be a product of the fact that the Examiner does not appear to have the requisite level of skill in the relevant arts (see Errors #264 through #270).

Errors #161 through #165) Failure to acknowledge the particular meaning given to the terms “element of value” and “value driver”. It is well established that “*words of the claim are generally given their ordinary and customary meaning, unless it appears from the written description that they were used differently by the applicant. See Teleflex Inc. v. Ficosa North America Corp.*, 299 F.3d 1313, 1325, 63 USPQ2d 1374, 1381 (Fed. Cir. 2002), *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342, 60 USPQ2d 1851, 1854 (Fed. Cir. 2001), and MPEP § 2111.01. The term “element of value” was given a particular meaning (see lines 8 through 10 on page 19 of the specification) and the term “value driver” was also given a particular meaning in the written description (see lines 4 through 7 on page 54 of the specification).

**Errors 166 through 170** – *The Supreme Court in KSR noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court quoting In re Kahn 41 stated that “[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal*

*conclusion of obviousness (KSR, 550 U.S. at 1, 82 USPQ2d at 1396)."* In spite of this well known requirement, the Examiner has not provided the required explanation. In particular, the Examiner has not explained what would motivate someone of average skill in the art to destroy the functionality of the Bielinski invention and modify the principle of operation of all the references as discussed under errors 101 through 145. This explanation is particularly important when one considers that the cited documents teach away from all claimed methods and/or fail to teach or suggest almost every claim limitation as discussed under errors 1 through 100. In place of an explanation with articulated reasoning and a rational underpinning the Examiner has reached a conclusion of obviousness on the basis of conclusory statements supported by almost two hundred errors in the facts and the law. Errors in the law include those identified under errors 146 through 165. Because no rational underpinning has been provided to support the legal conclusion of obviousness, the prima facie case of obviousness cannot be properly established.

**Errors 171 through 180** – In *Dickinson v. Zurko*, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of U.S.P.T.O. findings are the standards set forth in the Administrative Procedure Act ("APA") at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. Errors in the claim rejections caused by the apparent failure to meet any of the requirements of the APA include:

Errors #171 through #175) Failure to acknowledge the fact that the claim rejections fail under the substantial evidence standard. Errors 1 through 170 clearly show that the relevant Office Action fails to provide even a scintilla of evidence to support the obviousness rejections of claim 72, claim 73, claim 74, claim 75 and claim 47 and that as a result the rejections fail to meet the substantial evidence standard.

Errors #176 through #180) Failure to acknowledge the fact that the claim rejections fail under the arbitrary and capricious standard. The Appellant respectfully submits that the obviousness rejection of claim 72, claim 73, claim 74, claim 75 and claim 47 also fails to pass the arbitrary and capricious test for a number of reasons including the fact that:

- a) as detailed above, the references cited by the Examiner provide substantial evidence of novelty, non-obviousness and newness of the rejected claims (see errors 1 through 145);
- b) there is no rational connection between the statutory requirements for an obviousness rejection, the agency fact findings and the rejection of the claims (see



errors 146 through 165),

c) no rational underpinning has been provided to support the legal conclusion of obviousness (see errors 166 through 170), and

d) prior agency fact-findings have shown that 35 U.S.C. 103 requirements for non-obviousness are apparently not always considered during the prosecution and allowance of large company patent applications. This apparently unequal application of the law comprises an apparent violation of 35 USC 3.

Because the claim rejections do not meet either standard of the APA, the prima facie case of obviousness cannot be properly established.

Summarizing the above, the Appellant respectfully submits that the Examiner has failed to produce the evidence required to satisfy the requirements of the APA and/or establish a prima facie case of obviousness for a single claim. These failures provide additional evidence that the claimed invention is new, novel and non-obvious.

**Issue 4 - Whether claim 49, claim 50, claim 51 and claim 52 are patentable under 35 USC §103(a) over Bielinski in view of Mauboussin or in view of Stork?**

The claims are patentable because the claim rejections are based on one hundred eighteen (118) errors in the facts and in the law. Because of these errors, the cited combination of teachings (Bielinski, Mauboussin and Stork) and the arguments related to the cited combination of teachings fail to establish a prima facie case of obviousness for every rejected claim as detailed below.

**Errors 1 through 36** –Errors in the claim rejections caused by the apparent failure to acknowledge the fact that all the cited references teach away from the invention described in claim 49, claim 50, claim 51 and claim 52 include:

Errors #1 through #4) A failure to acknowledge that Bielinski teaches away from the claimed method of analyzing and modeling enterprise financial performance by category of value. Bielinski, which is the primary reference for all obviousness rejections, teaches and relies on the VBM method of discounted cash flow modeling. VBM uses Shareholder Value Analysis (hereinafter, SVA) principles, including a tree based model of cash flow, but advances the technique by using historical data, operations linked value drivers and concurrent changes in multiple value drivers. In accordance with the VBM/SVA method, most of the tree is used for calculating the actual cash flow for prior periods. The remainder of the tree is used for determining the cost of capital used to discount the cash

flow. Putting the two parts of the tree together, the VBM method teaches that the only way to increase enterprise value is to increase the value of period cash flow (see Bielinski and Evidence Appendix, pages 115 – 122). By way of contrast, the claimed invention teaches that as many as three categories of value determine the value of an enterprise as shown in the table below.

Categories of value per 09/764,068	Categories of value per Bielinski
1. Current operation (cash flow), 2. Market sentiment, and 3. Real options.	1. Cash flow (current operation)

By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 49, claim 50, claim 51 and claim 52.

Errors #5 through #8) A failure to acknowledge that Bielinski teaches away from the claimed analysis and modeling of enterprise financial performance by element of value. Bielinski teaches VBM that relies on SVA principles (including the use of a single tree of equations) to calculate an enterprise value from historical cash flow. The portion of the tree used for calculating historical cash flow is built by joining together a series of nodes where the inputs to each node are mathematically combined to produce a node output that becomes an input to a node at a higher level in the tree. The inputs to the VBM/SVA cash flow tree consist of: activity measures (i.e. volume of calls received, number of transactions completed and pounds of material used), counts (i.e. number of service delivery centers and number of employees), expenditure data (i.e. material costs, employee annual salary and cost per station), and summary financial measures (i.e. inventory turnover ratio and sales growth rate) These inputs mathematically combine to produce the summary accounting numbers used for calculating the historical cash flow. None of the VBM inputs teach or suggest an “element of value” as defined in the written description.

Aspect of financial performance	Designation per 09/764,068	Designation per Bielinski
Raw material cost	Sub-component of expense value	Operational value driver
Production labor cost	Sub-component of expense value	Operational value driver

By way of contrast, the claimed invention teaches that elements of value performance drives current operation cash flow and the other categories of value and that statistical summaries of element of value performance are the only inputs to the models of each

category of value – including the current operation model. Consistent with the different teachings regarding the drivers of enterprise financial performance, Bielinski teaches a different definition of the term “value driver” and defines sub-components of expense value as operational value drivers (see Table). By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 49, claim 50, claim 51 and claim 52.

Errors #9 through #12) A failure to acknowledge that Bielinski teaches away from the claimed statistical analysis of enterprise financial performance. Bielinski teaches a method that calculates the actual amount of enterprise cash flow (see Bielinski, Table 1). By teaching a reliance on actual numbers, Bielinski teaches away from the claimed multivariate statistical analysis. By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 49, claim 50, claim 51 and claim 52.

Errors #13 through #16) A failure to acknowledge that Bielinski teaches away from analyzing employees and processes as elements of value that contribute to the value of one or more categories of value. Contrary to the statement made in the March 31, 2009 Office Action, Bielinski does not teach the analysis of alliances, employee, partners, processes and/or vendors as elements of value (or anything of the listed elements of value). None of these elements of value are mentioned or suggested in the Bielinski document. Bielinski does mention human resource costs, material costs and scrap costs and as such teaches that human resources and processes that use materials are liabilities that should be minimized and not elements of value contribute to the value of the categories of value. By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 49, claim 50, claim 51 and claim 52.

Errors #17 through #20) A failure to acknowledge that Bielinski teaches away from the claimed method of analyzing enterprise financial performance by teaching and relying on different assumptions regarding the relationship between input values and cash flow value. Bielinski teaches that inputs have a linear relationship to the value of cash flow. By way of contrast, the claimed invention teaches that inputs may have a linear or non-linear effect on the value of the categories of value. By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 49, claim 50, claim 51 and claim 52.

Errors #21 through #24) A failure to acknowledge that Bielinski teaches away from the claimed method of analyzing enterprise financial performance by teaching and relying on different assumptions regarding market efficiency. In accordance with SVA principles, Bielinski teaches that the market is strong form, efficient (aka standard valuation model) and that market sentiment value is zero. By way of contrast, the claimed invention does not make any assumptions about market efficiency. Accordingly, the market may be strong form, efficient (market sentiment value is zero) or it may be inefficient (market sentiment value may be above or below zero). By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 49, claim 50, claim 51 and claim 52.

Errors #25 through #28) A failure to acknowledge that Mauboussin teaches away from the claimed method of valuing real options. The claimed invention teaches valuing real options with a discount rate that comprises a base discount rate plus a risk factor for each element of value that makes a causal contribution to an organization market value. Mauboussin teaches away by teaching that real options should be valued using the risk free interest rate for discounting. By exclusively teaching methods that teach away from the claimed invention, Mauboussin provides additional evidence of the novelty, non-obviousness and newness of claim 49, claim 50, claim 51 and claim 52.

Errors #29 through #32) A failure to acknowledge that Stork teaches away from the claimed method of predictive model development. The claimed invention teaches selecting the best predictive model algorithm from a plurality of different types. Stork teaches away from the claimed method by teaching the exclusive use of neural network models. By exclusively teaching methods that teach away from the claimed invention, Stork provides additional evidence of the novelty, non-obviousness and newness of claim 49, claim 50, claim 51 and claim 52.

Errors #33 through #36) A failure to acknowledge that Stork teaches away from the claimed method of using predictive models for regression analysis. The claimed invention teaches the development and use of causal predictive models for regression analysis. Stork teaches away from the claimed method by teaching the development and use of predictive models that are not causal models, for classification. By exclusively teaching methods that teach away from the claimed invention, Stork provides additional evidence of the novelty, non-obviousness and newness of claim 49, claim 50, claim 51 and claim 52.

**Errors 37 through 57** – Errors in the claim rejections caused by the apparent failure to acknowledge the fact that the cited documents do not teach one or more limitations of the claimed invention include:

Errors #37 through #48) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 49 (affects claims 50, 51 and 52), including:

- a) *identifying one or more elements of value that make a causal contribution to an organization market value ( #37 - #40),*
- b) *computing a difference between a real option value calculated using the company cost of capital as the discount rate and a value calculated using a real option discount rate comprised of a base discount rate plus a risk factor for each element of value that makes a causal contribution to organization market value (#41 - #44); and*
- c) *assigning the value difference to the different elements of value based on their relative contribution to a calculated difference in the two discount rates (#45 - #48).*

Error #49) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 50, including: *identify element of value contributions by learning from the data.*

Error #50) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 51, including: *the discount rate for a real option valuation comprises a base discount rate plus a risk factor for each element of value that makes a causal contribution to an organization market value.*

Errors #51 through #57) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 52, including:

- a) *identifying one or more value drivers for each element of value (#51),*
- b) *developing one or more element impact summaries from said value drivers for market value and each component of value (#52),*
- c) *identifying a best fit combination of element impact summaries and predictive model algorithm for modeling market value and each component of value (#53),*
- d) *determining a relative strength for each of the elements of value causal to market value change vis a vis competitors (#54),*
- e) *calculating a real option discount rate using the relative element strength information for the elements that support the real option (#55),*
- f) *calculating a real option value and identifying a contribution to real option value by*

*element of value using said real option discount rate (#56), and*  
*g) identifying a net element contribution to enterprise market value by category of value by*  
*combining the results from the processing completed in steps a through f (#57).*

**Errors 58 through 73** - It is well established that when “*the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)*”. Errors in the claims rejections caused by the failure to acknowledge that principles of operation of the Bielinski invention would have to be changed to replicate the functionality of the claimed invention, include:

Errors #58 through #61) One principle of operation Bielinski relies on is the standard model which teaches that cash flow is the sole determinant of enterprise value. This principle of operation would have to be changed to replicate the functionality of the claimed invention and recognize the fact that enterprise value includes a number of categories of value (i.e. real options, market sentiment) that are not included in the standard model (see Evidence Appendix, pages 120 - 122). Affects all claims.

Errors #62 through #65) A second principle of operation that Bielinski relies on is the use of the actual prior period cash flow to calculate an enterprise value (see Evidence Appendix, pages 120 - 122). This principle of operation would have to be changed to replicate the functionality of the claimed inventions because the claimed inventions rely on a series of multivariate statistical analyses where the only inputs are element of value impact summaries and the primary outputs are between one and zero (category valuations are determined separately). Changing to a series of analyses using statistical models for identifying relative contributions and separate models for calculating segment valuations would be a change in another principle of operation of the Bielinski invention. Affects all claims.

Errors #66 through #69) A third principle of operation that Bielinski teaches and relies on is that activities, counts, expenditures and summary measures determine cash flow and that value drivers are high level summaries of enterprise financial performance (i.e. operating profit margin). Bielinski also teaches that operational value drivers are sub-components of expense value (i.e. raw material cost, human resource cost), and/or summary financial statistics (inventory turnover and sales growth percentage). This principle of operation would have to be changed to replicate the functionality of the claimed inventions because the claimed inventions teach and rely on the fact that elements of value drive cash flow (and

other segments of value) and that value drivers are characteristics of elements of value. Affects all claims.

Errors #70 through #73) A fourth principle of operation that Bielinski teaches and relies on is that analyses of cash flow only require consideration of the factors that can be used to calculate an actual cash flow. By way of contrast, the claimed invention teaches and relies on the fact that elements of value may have an indirect and/or non linear impact on cash flow and/or a category valuation. The fourth principle of operation would have to be changed to add a consideration of the factors that have an indirect and/or non-linear relationship to cash flow to the analysis method taught by Bielinski.

Because the required modification of Bielinski would change four of its principles of operation, the prima facie case of obviousness cannot be properly made.

**Errors 74 through 81** - Errors in the claims rejections caused by the failure to acknowledge that principles of operation of the Bielinski invention would have to be changed to replicate the functionality of the claimed invention, include:

Errors #74 through #77) One principle of operation Mauboussin relies on is that real options are valued using the risk free rate. By way of contrast, the claimed invention teaches the use of a discount rate that comprises a base discount rate plus a risk factor for each element of value that makes a causal contribution to an organization market value. Because the required modification of Mauboussin would change a principle of operation, the prima facie case of obviousness cannot be properly made.

Errors #78 through #81) Two principles of operation associated with Stork: the exclusive reliance on neural network models and the exclusive focus on classification would have to be modified to replicate the functionality of the claimed invention. Because the required modification of Stork would change two of its principles of operation, the prima facie case of obviousness cannot be properly made.

**Errors 82 through 89** - It is well established that *when a modification of a reference destroys the intent, purpose or function of an invention such a proposed modification is not proper and the prima facie cause of obviousness cannot be properly made (In re Gordon 733 F.2d 900, 221 U.S.P.Q 1125 Fed Circuit 1984)*. Errors in the claims rejections caused by the failure to acknowledge that the functionality of the Bielinski invention would be destroyed if it was modified to replicate the functionality of the claimed invention, include:

Errors #82 through #85) The claimed computational model of enterprise market value by element of value and category of value comprises predictive models up to two categories of value, the current operation and/or market sentiment categories of value. Bielinski teaches a method that relies on a single tree of equations to identify the inputs that are related to the actual amount of enterprise cash flow, calculate the cash flow and calculate an enterprise value. Modifying the Bielinski invention to use a predictive model that completes a statistical analysis for all or part of the tree would destroy its ability to perform its intended function by: a) producing non linear combinations of data inputs. As discussed previously, the Bielinski model relies on linear, mathematical combinations of inputs. As is well known to those of average skill in the art, neural networks generally produce outputs that are the product of a non-linear combination of inputs and b) replacing the equations of actual numbers with statistical relationships (see Evidence Appendix, pages 115 - 119).

It should be noted that if the Bielinski tree were not modified to use a predictive model, then it would not be able to replicate any of the functionality of the claimed invention. Because the required modification of Bielinski would destroy its ability to perform its intended function, the prima facie case of obviousness cannot be properly made. Affects all claims

Errors #86 through #89) Failure to provide any evidence to support assertions that the modifications to Bielinski required to replicate the claimed invention would not destroy its functionality. After additional evidence documenting the fact that the invention described by Bielinski would be destroyed by the modifications required to replicate the claimed functionality, the Examiner changed the assertion regarding the Bielinski document to state that it somehow taught other versions of Value Based Management that would not be destroyed by the required modifications. Evidence that Bielinski teaches an invention that would be destroyed by the required modifications includes:

- a) the Bielinski document which specifically states that the Value Based Management method it teaches relies on SVA principles,
- b) Shareholder Value Analysis by Alfred Rappaport which teaches a tree based analysis of cash flow (see related proceedings for acknowledgement of this fact),
- c) the declaration under Rule 132 provided by Dr. Brous (see Evidence Appendix, pages 120 - 122),
- d) "What is Value Based Management:" by Thomas Koller, one of the inventors of VBM,
- e) the declaration under Rule 132 provided by Dr. Rauenzahn (see Evidence Appendix, pages 115 - 119), and



f) the Hasendoncks reference.

Because the required modifications of Bielinski would destroy its ability to complete its intended function, the prima facie case of obviousness cannot be properly made. Affects all claims.

**Errors 90 through 105** – The claim rejections are based on 35 U.S.C. §103(a) which states: *A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title [35 USC 102], if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.* Errors in the claim rejections caused by the apparent failure to meet any of the statutory requirements for claim rejection include:

Errors #90 through #93) Failure to acknowledge the fact that the cited documents fail to teach or suggest the subject matter as whole. As illustrated by the preceding discussion, the obviousness rejections appear to be based of a non-existent standard for obviousness “mentions the same word as another document” instead of “teaches or suggests the subject matter as a whole” as there is no aspect of the rejected claims that is taught or suggested by the cited documents. It is also well established that the “*Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art.*” *In re Lowry*, 32 F.3d 1579, 1582 (Fed. Cir. 1994). As detailed under errors 1 through 89, it does not appear that any of the claim limitations were actually considered.

Errors #94 through #97) Failure to acknowledge the fact that the claim rejections have been authored by an individual(s) who appears to lack the level of skill in the art required to author such rejections. It is well established that the “*hypothetical ‘person having ordinary skill in the art’ to which the claimed subject matter pertains would, of necessity have the capability of understanding the scientific and engineering principles applicable to the pertinent art*” *Ex parte Hiyamizu*, 10 USPQ2d 1393, 1394 (Bd. Pat. App. & Inter. 1988). It is unlikely that anyone who understood the scientific and engineering principles applicable to the pertinent art would ever suggest Bielinski, Mauboussin or Stork as a reference in support of an obviousness rejection for the claimed inventions for the reasons described previously under errors 1 through 93.

Errors #98 through #101) Failure to acknowledge the fact that the claim rejections are based on apparent misrepresentations regarding the teachings of the cited documents. This apparent misrepresentation may be a product of the fact that the Examiner does not appear to have the requisite level of skill in the relevant arts (see Errors #94 through #97).

Errors #102 through #105) Failure to acknowledge the particular meaning given to the terms “element of value” and “value driver”. It is well established that “*words of the claim are generally given their ordinary and customary meaning, unless it appears from the written description that they were used differently by the applicant. See Teleflex Inc. v. Ficosa North America Corp., 299 F.3d 1313, 1325, 63 USPQ2d 1374, 1381 (Fed. Cir. 2002), Rexnord Corp. v. Laitram Corp., 274 F.3d 1336, 1342, 60 USPQ2d 1851, 1854 (Fed. Cir. 2001), and MPEP § 2111.01.* The term “element of value” was given a particular meaning (see lines 8 through 10 on page 19 of the specification) and the term “value driver” was also given a particular meaning in the written description (see lines 4 through 7 on page 54 of the specification).

**Errors 106 through 110** – *The Supreme Court in KSR noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court quoting In re Kahn 41 stated that “[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness (KSR, 550 U.S. at 1, 82 USPQ2d at 1396).”* In spite of this well known requirement, the Examiner has not provided the required explanation. In particular, the Examiner has not explained what would motivate someone of average skill in the art to destroy the functionality of the Bielinski invention and modify the principle of operation of all the references as discussed under errors 58 through 89. This explanation is particularly important when one considers that the cited documents teach away from all claimed methods and/or fail to teach or suggest almost every claim limitation as discussed under errors 1 through 57. In place of an explanation with articulated reasoning and a rational underpinning the Examiner has reached a conclusion of obviousness on the basis of conclusory statements supported by over a hundred errors in the facts and the law. Errors in the law include those identified under errors 90 through 105. Because no rational underpinning has been provided to support the legal conclusion of obviousness, the prima facie case of obviousness cannot be properly established.

**Errors 111 through 118** – In Dickinson v. Zurko, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of U.S.P.T.O. findings are the standards set forth in the Administrative Procedure Act (“APA”) at 5 U.S.C. 706 (1994). The

APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. Errors in the claim rejections caused by the apparent failure to meet any of the requirements of the APA include:

Errors #111 through #114) Failure to acknowledge the fact that the claim rejections fail under the substantial evidence standard. Errors 1 through 110 clearly show that the relevant Office Action fails to provide even a scintilla of evidence to support the obviousness rejections of claim 49, claim 50, claim 51 and claim 52 and that as a result the rejections fail to meet the substantial evidence standard.

Errors #115 through #118) Failure to acknowledge the fact that the claim rejections fail under the arbitrary and capricious standard. The Appellant respectfully submits that the obviousness rejection of claim 49, claim 50, claim 51 and claim 52 also fails to pass the arbitrary and capricious test for a number of reasons including the fact that:

- a) as detailed above, the references cited by the Examiner provide substantial evidence of novelty, non-obviousness and newness of the rejected claims (see errors 1 through 89);
- b) there is no rational connection between the statutory requirements for an obviousness rejection, the agency fact findings and the rejection of the claims (see errors 90 through 105),
- c) no rational underpinning has been provided to support the legal conclusion of obviousness (see errors 106 through 110), and
- d) prior agency fact-findings have shown that 35 U.S.C. 103 requirements for non-obviousness are apparently not always considered during the prosecution and allowance of large company patent applications. This apparently unequal application of the law comprises an apparent violation of 35 USC 3.

Because the claim rejections do not meet either standard of the APA, the prima facie case of obviousness cannot be properly established.

Summarizing the above, the Appellant respectfully submits that the Examiner has failed to produce the evidence required to satisfy the requirements of the APA and/or establish a prima facie case of obviousness for a single claim. These failures provide additional evidence that the claimed invention is new, novel and non-obvious.

**Issue 5 – Whether claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71 are patentable under 35 USC §103(a) over Davis in view of Bielinski, in view of Srivastava or in view of Cleland?**

The claims are patentable because the claim rejections are based on two hundred fifty six (256) errors in the facts and in the law. Because of these errors, the cited combination of teachings (Bielinski, Cleland, Davis and Srivastava) and the arguments related to the cited combination of teachings fail to establish a prima facie case of obviousness for every rejected claim as detailed below.

**Errors 1 through 85** –Errors in the claim rejections caused by the apparent failure to acknowledge the fact that all the cited references teach away from the invention described in claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71 include:

Errors #1 through #7) A failure to acknowledge that Bielinski teaches away from the claimed statistical analysis of enterprise financial performance. Bielinski teaches a method that calculates the actual amount of enterprise cash flow (see Bielinski, Table 1). By teaching a reliance on actual numbers, Bielinski teaches away from the claimed analysis that relies on a predictive model. By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71.

Errors #8 through #14) A failure to acknowledge that Bielinski teaches away from the claimed method of analysis by teaching and relying on different assumptions regarding the relationship between input values and output value (cash flow). Bielinski teaches that inputs have a linear relationship to the value of the output (cash flow). By way of contrast, the claimed invention teaches that inputs may have a linear or non-linear effect on the output value (i.e. category of value). By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71.

Errors #15 through #21) A failure to acknowledge that Davis teaches away from the claimed method of predictive model development. The claimed invention teaches using independent components of application software to acquire data that has already been integrated using xml and a common schema and transform the data into a predictive model. Transforming data into a predictive model comprises the identification of relevant data variables that will be included in a model. Davis teaches away by teaching the use of a viewer (100) that relies on a tree view defined by a common data type definition (dtd) to transform, format, manipulate and display data that has been pre-specified by line into a

small amount of RDML data. By exclusively teaching methods that teach away from the claimed invention, Davis provides additional evidence of the novelty, non-obviousness and newness of claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71.

Errors #22 through #28) A failure to acknowledge that Davis teaches away from the claimed creation of an integrated database. The claimed invention teaches the creation of a single, integrated database with all the data obtained from a plurality of sources using xml and a common schema. Davis teaches away by teaching: a) the storage of information that guides the conversion of data from a plurality of sources to an RDML format in an image database (226) that is separate from the source databases (230), b) the placement of RDML conversion information (504) in the source databases (230), and c) that conversion information and source data should be combined in accordance with a common dtd using a viewer (100) or formatter (216) to produce documents (102) or views (108) that contain small amounts of data in an RDML format on demand instead of developing an integrated database. By exclusively teaching methods that teach away from the claimed invention, Davis provides additional evidence of the novelty, non-obviousness and newness of claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71.

Errors #29 through #35) A failure to acknowledge that Davis teaches away from the claimed method of using a common schema as the basis for data integration. The claimed invention teaches integrating, converting and storing all source data in a single database using xml and a common schema. Davis teaches away by teaching the use of a xml 1.0 compliant tree view as the basis for combining data from different sources. Davis also teaches the separate storage of source data (230) and conversion information in an image database (226). By exclusively teaching methods that teach away from the claimed invention, Davis provides additional evidence of the novelty, non-obviousness and newness of claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71.

Errors #36 through #42) A failure to acknowledge that Davis teaches away from the claimed method of metadata mapping. The claimed invention teaches mapping metadata from source databases to a database schema defined by xml metadata. Davis teaches away by teaching data field mapping from source databases to an RDML document (see Davis, Column 15, lines 24 – 26). By exclusively teaching methods that teach away from the claimed invention, Davis provides additional evidence of the novelty, non-obviousness and newness of claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71.

Errors #43 through #49) A failure to acknowledge that Davis teaches away from the

claimed method of storing data. The claimed invention teaches the storage of data in an integrated database in accordance with a common schema. Davis teaches away by teaching the storage of data by line in accordance with a common dtd (see Davis, Column 21, line 58) in RDML documents. The RDML documents are stored as a vector, hash table or dictionary (see Davis, Column 33, line 65). By exclusively teaching methods that teach away from the claimed invention, Davis provides additional evidence of the novelty, non-obviousness and newness of claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71.

Errors #50 through #56) A failure to acknowledge that Cleland teaches away from the claimed predictive model development. The claimed invention teaches using predictive models to objectively analyze the impact of elements of value such as customers on financial performance. Cleland teaches away from the claimed method by teaching a reliance on subjective impressions regarding quality and comparability for measuring the value of enterprise offerings to customers. By exclusively teaching methods that teach away from the claimed invention, Cleland provides additional evidence of the novelty, non-obviousness and newness of claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71.

Errors #57 through #63) A failure to acknowledge that Cleland teaches away from the claimed method of analysis. The claimed invention teaches the analysis and measurement of the value of customers and a plurality of other elements of value to an organization. Cleland teaches the analysis and measurement of organization offerings to customers. By exclusively teaching methods that teach away from the claimed invention, Cleland provides additional evidence of the novelty, non-obviousness and newness of claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71.

Errors #64 through #70) A failure to acknowledge that Lyons teaches away from the claimed method of integrating data. The claimed invention teaches efficiently storing data in accordance with xml and a common schema. Lyons teaches away from the claimed method by teaching the massively redundant storage of data in accordance with a predetermined pattern relative to a SEPT value. By exclusively teaching methods that teach away from the claimed invention, Lyons provides additional evidence of the novelty, non-obviousness and newness of claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71.

Errors #71 through #77) A failure to acknowledge that Srivastava teaches away from the

claimed method of creating an integrated database. The claimed invention teaches using the metadata mapping information obtained from a plurality of source databases to create a single, integrated database with a common schema defined by xml metadata. Srivastava teaches away by teaching: a) extracting metadata and time-based samples from a media file, b) collecting additional metadata describing the media file from sources external to the file, c) producing a summary of the media file from the data collected in a) and b), and d) creating an integrated database by mapping elements from the summaries to a database schema along with the source XML data and the original media file. By exclusively teaching methods that teach away from the claimed invention, Srivastava provides additional evidence of the novelty, non-obviousness and newness of claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71.

Errors #78 through #84) A failure to acknowledge that Srivastava teaches away from the claimed method of metadata mapping. The claimed invention teaches mapping metadata from source databases to a database schema defined by xml metadata. Srivastava teaches away by teaching document element mapping from xml documents to a database schema (see Srivastava, Column 8, lines 37 – 41). By exclusively teaching methods that teach away from the claimed invention, Srivastava provides additional evidence of the novelty, non-obviousness and newness of claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71.

Error #85) A failure to acknowledge that Bielinski teaches away from the claimed analysis of real options. Bielinski teaches and relies on the VBM method of discounted cash flow modeling. VBM uses Shareholder Value Analysis (hereinafter, SVA) principles, including a tree based model of cash flow, but advances the technique by using historical data, operations linked value drivers and concurrent changes in multiple value drivers. In accordance with the VBM/SVA method, most of the tree is used for calculating the actual cash flow for prior periods. The remainder of the tree is used for determining the cost of capital used to discount the cash flow. Putting the two parts of the tree together, the VBM method teaches that the only way to increase enterprise value is to increase the value of period cash flow (see Evidence Appendix, pages 120 - 122). By way of contrast, the claimed invention teaches that as many as three categories of value determine the value of an enterprise as shown in the table below. By exclusively teaching methods that teach away from the claimed invention, Bielinski provides additional evidence of the novelty, non-obviousness and newness of claim 68.

Categories of value per 09/764,068	Categories of value per Bielinski
1. Current operation (cash flow), 2. Market sentiment, and 3. Real options.	1. Cash flow (current operation)

**Errors 86 through 146** – Errors in the claim rejections caused by the apparent failure to acknowledge the fact that the cited documents do not teach one or more limitations of the claimed invention include:

Errors #86 through #95) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 64 (affects claims 65, 67, 68 and 69), including:

- a) using two or more independent components of application software to produce one or more useful results by transforming data representative of a physical object or substance into a predictive model that has a utility in managing or monitoring a real world activity of said object or substance (#86 - #90), and*
- b) where said data has been aggregated from two or more systems in accordance with a common model or schema defined by an xml metadata standard (#91 - #95).*

Error #96) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 65, including: *independent components of application software can be flexibly combined as required to support the development of one or more useful results.*

Errors #97 through #117) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 67, including: *independent components of application software that complete processing selected from the group consisting of: analysis (#97), attribute derivation (#98), capitalization (#99), causal analysis (#100), classification (#101), clustering (#102), count linkages (#103), data acquisition (#104), data conversion (#105), data storage (#106), data transformation (#107), element life estimation (#108), indicator selection (#109), induction (#110), keyword counting (#111), keyword match identification (#112), locate linkages (#113), relative strength determination (#114), statistical learning (#115), valuation (#116) and vector generation (#117).*

Errors #118 through #129) Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 68, including: *a method that produces useful results selected from the group consisting of: element contribution*



*determination (#118), element impact quantification (#119), element valuation (#120), enterprise financial performance optimization (#121), enterprise financial performance simulation (#122), future market value optimization (#123), future market value quantification (#124), management reporting (#125), real option discount rate calculation (#126), real option valuation (#127), share price valuation (#128), and sub-element clustering (#129).*

Errors #130 through #139 Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 69, including: *systems selected from the group consisting of alliance management systems (#130), brand management systems (#131), customer relationship management systems (#132), channel management systems (#133), estimating systems (#134), intellectual property management systems (#135), process management systems (#136), supply chain management systems (#137), vendor management systems (#138), external databases (#139).*

Errors #140 through #145 Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 70 (affects claims 71), including:

- a) integrating, converting and storing data representative of an organization from a plurality of disparate sources in accordance with a common xml schema in order to transform said data into an integrated database (#140 and #141),*
- b) outputting said database (#142 and #143)*
- c) establishing a set of integration and conversion rules using a metadata and conversion rules window and saved in metadata mapping table (#144 and #145).*

Error #146 Failure to acknowledge the fact that the cited documents do not teach or suggest one or more limitations of claim 71, including: *where each of one or more tables in an application database further comprise one axis that is defined by one or more time periods that require data and another axis that is defined by one or more data categories selected from the group consisting of components of value, sub components of value, known value drivers, elements of value, non-relevant attributes and combinations thereof.*

**Errors 147 through 157** - Errors in the claims rejections caused by the failure to acknowledge that principles of operation of the Bielinski invention would have to be changed to replicate the functionality of the claimed invention, include:

Error #147) One principle of operation Bielinski relies on is the standard model which teaches that cash flow is the sole determinant of enterprise value. This principle of operation would have to be changed to replicate the functionality of the claimed invention and recognize the fact that enterprise value includes a number of categories of value (i.e. real options, market sentiment) that are not included in the standard model (see Evidence Appendix, pages 115 - 122). Affects claim 68.

Errors #148 through #152) A second principle of operation that Bielinski relies on is the use of the actual prior period cash flow to calculate an enterprise value (see Evidence Appendix, pages 115 - 122). This principle of operation would have to be changed to replicate the functionality of the claimed inventions because the claimed inventions rely on multivariate analyses where the primary outputs are between one and zero. Changing to statistical models for identifying relative contributions and separate models for calculating segment valuations would be a change in another principle of operation of the Bielinski invention. Affects claims 64, 65, 67, 68 and 69.

Errors #153 through #157) A third principle of operation that Bielinski teaches and relies on is that analyses of cash flow only require consideration of the factors that have a direct, linear relationship on an output value. By way of contrast, the claimed invention teaches and relies on the fact that inputs may have an indirect and/or non linear impact an output value. The third principle of operation would have to be changed to add a consideration of the factors that have an indirect and/or non-linear relationship to output values to the analysis method taught by Bielinski. Affects claims 64, 65, 67, 68 and 69.

**Errors 158 through 193** - Errors in the claims rejections caused by the failure to acknowledge that principles of operation of the Cleland, Davis and Srivastava references would have to be changed to replicate the functionality of the claimed invention, include:

Errors #158 through #164) One principle of operation that Davis teaches and relies on is the identification and storage of RDML conversion information separately from source data. The source data and conversion information are then combined in a viewer or formatter to produce small amounts of data with a common dtd on demand. By way of contrast, the claimed invention teaches and relies on the conversion, integration and storage of source data in a single database using a common schema. Davis would have to be modified to replicate the claimed functionality. Because the required modification of Davis would change one of its principles of operation, the prima facie case of obviousness cannot be

properly made. Affects all claims.

Errors #165 through #171) Another principle of operation that Davis teaches and relies on is data field mapping” to map from source databases to an RDML document defined by a dtd. By way of contrast, the claimed invention teaches and relies on “metadata mapping” to map from source database metadata to integrated database metadata. Davis would have to be modified to replicate the claimed functionality. Because the required modification of Davis would change one of its principles of operation, the prima facie case of obviousness cannot be properly made. Affects all claims.

Errors #172 through #178) A third principle of operation that Davis teaches and relies on is the storage of data by line in accordance with a dtd (see Davis, Column 21, line 58). By way of contrast, the claimed invention teaches integrating and storing data in accordance with a common schema. Davis would have to be modified to replicate the claimed functionality. Because the required modification of Davis would change one of its principles of operation, the prima facie case of obviousness cannot be properly made. Affects all claims.

Errors #179 through #185) One principle of operation that Srivastava teaches and relies on is the use of “document element mapping” to map elements from xml documents to a database schema. By way of contrast, the claimed invention teaches and relies on “metadata mapping” to map from source database metadata to integrated database metadata. Srivastava would have to be modified to replicate the claimed functionality. Because the required modification of Srivastava would change one of its principles of operation, the prima facie case of obviousness cannot be properly made. Affects all claims.

Errors #186 through #192) Another principle of operation that Srivastava teaches and relies on is analyzing source data to develop a summary of the contents before storing the summary in a database along with the source data. By way of contrast, the claimed invention teaches and relies on the conversion, integration and storage of source data in a single database using a common schema without a summary. Srivastava would have to be modified to replicate the claimed functionality. Because the required modification of Srivastava would change one of its principles of operation, the prima facie case of obviousness cannot be properly made. Affects all claims.

Error #193) One principle of operation that Cleland teaches and relies on is the use of two axis tables in a report. By way of contrast, the claimed invention teaches and relies on the

use of tables to store data. Cleland would have to be modified to replicate the claimed functionality. Because the required modification of Cleland would change one of its principles of operation, the prima facie case of obviousness cannot be properly made. Affects claim 72.

Because the required modifications of Cleland, Davis and Srivastava would change their principles of operation, the prima facie case of obviousness cannot be properly made.

**Errors 194 through 214** – It is well established that when a modification of a reference destroys the intent, purpose or function of an invention such a proposed modification is not proper and the prima facie cause of obviousness cannot be properly made (In re Gordon 733 F.2d 900, 221 U.S.PQ 1125 Fed Circuit 1984). Errors in the claims rejections caused by the failure to acknowledge that the functionality of the Bielinski and Davis inventions would be destroyed if they were modified to replicate the functionality of the claimed invention, include:

Errors #194 through #200) The claimed predictive models complete analyses of integrated data. By way of contrast, Bielinski teaches a method that relies on a single tree of equations to identify the inputs that are related to the actual amount of enterprise cash flow, calculate the cash flow and calculate an enterprise value. Modifying the Bielinski invention to use a predictive model that completes a statistical analysis for all or part of the tree would destroy its ability to perform its intended function by replacing the equations of actual numbers with statistical relationships (see Evidence Appendix, pages 115 - 119). Affects all claims.

Errors #201 through #207) Failure to provide any evidence to support assertions that the modifications to Bielinski required to replicate the claimed invention would not destroy its functionality. After additional evidence documenting the fact that the invention described by Bielinski would be destroyed by the modifications required to replicate the claimed functionality, the Examiner changed the assertion regarding the Bielinski document to state that it somehow taught other versions of Value Based Management that would not be destroyed by the required modifications. Evidence that Bielinski teaches an invention that would be destroyed by the required modifications includes:

- a) the Bielinski document which specifically states that the Value Based Management method it teaches relies on SVA principles,
- b) Shareholder Value Analysis by Alfred Rappaport which teaches a tree based analysis of cash flow (see related proceedings for acknowledgement of this fact),
- c) the declaration under Rule 132 provided by Dr. Brous (see Evidence Appendix, pages

120 - 122),

- d) "What is Value Based Management:" by Thomas Koller, one of the inventors of VBM,
- e) the declaration under Rule 132 provided by Dr. Rauenzahn (see Evidence Appendix, pages 115 - 119), and
- f) the Hasendoncks reference.

Because the required modifications of Bielinski would destroy its ability to complete its intended function, the prima facie case of obviousness cannot be properly made. Affects all claims.

Errors #208 through #214) The function of the Davis invention is to use common data to organize, manipulate and present data in a graph or table by line (Davis, Column 21, Line 58). In accordance with the Davis invention, the data that will be analyzed and/or presented in a graph or table must be known before the data from different sources can be combined to produce a graph or table. By way of contrast, the system of the present invention stores data in accordance with a common schema and determines which data are to be presented in a graph or table only after completing one or more analyses of the integrated data have been completed. Modifying the Davis invention to replicate the functionality of the claimed invention would destroy its ability to perform its intended function and purpose. Because the required modification of the Davis invention would destroy its intended function and purpose, the prima facie case of obviousness cannot be properly made. Affects all claims.

**Errors 215 through 235** – The claim rejections are based on 35 U.S.C. §103(a) which states: *A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title [35 USC 102], if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.* Errors in the claim rejections caused by the apparent failure to meet any of the statutory requirements for claim rejection include:

Errors #215 through #221) Failure to acknowledge the fact that the cited documents fail to teach or suggest the subject matter as a whole. As illustrated by the preceding discussion, the obviousness rejections appear to be based on a non-existent standard for obviousness "mentions the same word as another document" instead of "teaches or suggests the subject matter as a whole" as there is no aspect of the rejected claims that is taught or

suggested by the cited documents. It is also well established that the *“Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art.” In re Lowry, 32 F.3d 1579, 1582 (Fed. Cir. 1994)*. As detailed under errors 1 through 214, it does not appear that any of the claim limitations were actually considered.

Errors #222 through #228) Failure to acknowledge the fact that the claim rejections have been authored by an individual(s) who appears to lack the level of skill in the art required to author such rejections. It is well established that the *“hypothetical ‘person having ordinary skill in the art’ to which the claimed subject matter pertains would, of necessity have the capability of understanding the scientific and engineering principles applicable to the pertinent art” Ex parte Hiyamizu, 10 USPQ2d 1393, 1394 (Bd. Pat. App. & Inter. 1988)*. It is unlikely that anyone who understood the scientific and engineering principles applicable to the pertinent art would ever suggest Bielinski, Cleland, Davis or Srivastava as a reference in support of an obviousness rejection for the claimed inventions for the reasons described previously under errors 1 through 221.

Errors #229 through #235) Failure to acknowledge the fact that the claim rejections are based on apparent misrepresentations regarding the teachings of the cited documents. This apparent misrepresentation may be a product of the fact that the Examiner does not appear to have the requisite level of skill in the relevant arts (see Errors #222 through #228).

**Errors 236 through 242** – *The Supreme Court in KSR noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court quoting In re Kahn 41 stated that “[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness (KSR, 550 U.S. at 1, 82 USPQ2d at 1396).”* In spite of this well know requirement, the Examiner has not provided the required explanation. In particular, the Examiner has not explained what would motivate someone of average skill in the art to destroy the functionality of the Bielinski and Davis inventions and modify the principle of operation of all the references as discussed under errors 147 through 214. This explanation is particularly important when one considers that the cited documents teach away from all claimed methods and/or fail to teach or suggest almost every claim limitation as discussed under errors 1 through 146. In place of an explanation with articulated reasoning and a rational underpinning the Examiner has reached a conclusion of obviousness on the basis of conclusory statements

supported by over two hundred errors in the facts and the law. Errors in the law include those identified under errors 215 through 235. Because no rational underpinning has been provided to support the legal conclusion of obviousness, the prima facie case of obviousness cannot be properly established.

**Errors 243 through 256** – In Dickinson v. Zurko, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of U.S.P.T.O. findings are the standards set forth in the Administrative Procedure Act (“APA”) at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. Errors in the claim rejections caused by the apparent failure to meet any of the requirements of the APA include:

Errors #243 through #249) Failure to acknowledge the fact that the claim rejections fail under the substantial evidence standard. Errors 1 through 242 clearly show that the relevant Office Action fails to provide even a scintilla of evidence to support the obviousness rejections of claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71 and that as a result the rejections fail to meet the substantial evidence standard.

Errors #250 through #256) Failure to acknowledge the fact that the claim rejections fail under the arbitrary and capricious standard. The Appellant respectfully submits that the obviousness rejection of claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71 also fails to pass the arbitrary and capricious test for a number of reasons including the fact that:

- a) as detailed above, the references cited by the Examiner provide substantial evidence of novelty, non-obviousness and newness of the rejected claims (see errors 1 through 214);
- b) there is no rational connection between the statutory requirements for an obviousness rejection, the agency fact findings and the rejection of the claims (see errors 215 through 235),
- c) no rational underpinning has been provided to support the legal conclusion of obviousness (see errors 236 through 242), and
- d) prior agency fact-findings have shown that 35 U.S.C. 103 requirements for non-obviousness are apparently not always considered during the prosecution and allowance of large company patent applications. This apparently unequal application of the law comprises an apparent violation of 35 USC 3.

Because the claim rejections do not meet either standard of the APA, the prima facie case of

obviousness cannot be properly established.

Summarizing the above, the Appellant respectfully submits that the Examiner has failed to produce the evidence required to satisfy the requirements of the APA and/or establish a prima facie case of obviousness for a single claim. These failures provide additional evidence that the claimed invention is new, novel and non-obvious.

**Issue 6 - Whether claim 46, claim 48, claim 53 and claim 54 are anticipated under 35 USC §102(b) by Bielinski?**

The claims are patentable because the claim rejections are based on one hundred seventy nine (179) errors in the facts and in the law. Because of these errors, the cited document (Bielinski) and the arguments related to the cited document fail to establish a prima facie case of anticipation for every rejected claim as detailed below.

**Errors 1 through 19** - It is well established that: *"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference."* *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Errors in the claim rejections caused by the apparent failure of the cited document to expressly or inherently describe elements of a claim include:

Errors #1 through #4) Failure to acknowledge the fact that Bielinski does not expressly or inherently describe an element of Claim 46, namely: *a program storage device readable by a computer, tangibly embodying a program of instructions executable by a computer to prepare data representative of an organization for use in processing.* The Bielinski document does not mention programs or program storage devices of any kind. The arithmetic described by Bielinski is apparently completed by a computer but this does not teach or imply that a program should instruct a computer to prepare the data required for completing the arithmetic described by Bielinski. Furthermore, preparing the handful of data required for completing the arithmetic described by Bielinski can readily be done manually. Affects all claims.

Errors #5 through #8) Failure to acknowledge the fact that Bielinski does not expressly or inherently describe an element of Claim 46, namely: *a program storage device readable by a computer, tangibly embodying a program of instructions executable by a computer to transform at least a portion of the data into a causal model of each of one or more categories of an organization value that identify and output a tangible value contribution of each of one or more elements of value to a current operation.* The Bielinski document



does not mention programs or program storage devices of any kind. The arithmetic described by Bielinski is apparently completed by a computer but this does not teach or imply that a program should instruct a computer develop a causal model. Bielinski does not expressly or inherently describe that data are transformed into a causal model. Bielinski does not expressly or inherently teach the identification or analysis of “elements of value” as the term is defined in the written description. Bielinski does not expressly or inherently teach that a causal model identifies and/or outputs a tangible value contribution of each of one or more elements of value to a current operation. Affects all claims.

Errors #9 through #12) Failure to acknowledge the fact that Bielinski does not expressly or inherently describe an element of Claim 46, namely: *a program storage device readable by a computer, tangibly embodying a program of instructions executable by a computer to transform at least a portion of the data into a causal model of each of one or more categories of an organization value that identify and output a tangible value contribution of each of one or more elements of value to a real option category of value* – The Bielinski document does not mention programs or program storage devices of any kind. Bielinski does not expressly or inherently describe that data are transformed into a causal model. Bielinski does not expressly or inherently teach the identification or analysis of “elements of value” as the term is defined in the written description. Bielinski does not expressly or inherently teach that a causal model identifies and/or outputs a tangible value contribution of each of one or more elements of value to a real option category of value. Furthermore, completing the arithmetic described by Bielinski does not expressly or inherently suggest: real options need to be evaluated. Affects all claims.

Errors #13 through #16) Failure to acknowledge the fact that Bielinski does not expressly or inherently describe an element of Claim 46, namely: *a program storage device readable by a computer, tangibly embodying a program of instructions executable by a computer that reports the value contribution of the elements of value using an electronic display or a paper document*. The Bielinski document does not mention programs or program storage devices of any kind. The arithmetic described by Bielinski is apparently completed by a computer but this does not teach or imply that a program should instruct a computer to provide reports. Bielinski does not expressly or inherently teach the identification or analysis of “elements of value” as the term is defined in the written description. Bielinski does not expressly or inherently describe reporting value contributions from any elements of value - it only provides an enterprise valuation (also, see c) above). Affects all claims

Error #17) Failure to acknowledge the fact that Bielinski does not expressly or inherently describe an element of Claim 48, namely: *where a tangible value contribution for each of one or more elements of value to each of one or more categories of value further comprises a direct element contribution to a category of value net of any element of value impacts on other elements of value*. Bielinski does not expressly or inherently teach the identification or analysis of “elements of value” as the term is defined in the written description. Bielinski does not teach the identification and/or output of: a direct contribution of each of one or more elements of value to each of one or more categories of value or an impact of one or more elements of value on other elements of value. Furthermore, Bielinski does not suggest: that a direct contribution or an impact of each of one or more elements of value should be identified and/or output.

Error #18) Failure to acknowledge the fact that Bielinski does not expressly or inherently describe an element of Claim 53, namely: *where the calculated value for each element of value further comprises a value for a point in time within a sequential series of points in time* – Bielinski does not expressly or inherently teach the identification or analysis of “elements of value” as the term is defined in the written description. Furthermore, Bielinski does not teach or suggest calculating a value for any elements of value for any points in time. The only thing the Bielinski invention teaches is the valuation of enterprise cash flow.

Error #19) Failure to acknowledge the fact that Bielinski does not expressly or inherently describe an element of Claim 54, namely: *where the net relative contribution for each element of value to each category of value further comprises a net causal contribution* – see the discussion for errors 1 through 16 above.

**Errors 20 through 38** - It is well established that: *“The identical invention must be shown in as complete detail as is contained in the .. claim.” Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989)*. Errors in the claim rejections caused by the apparent failure of the cited document to include the same level of detail found in the claim include:

Errors #20 through #23) Failure to acknowledge the fact that Bielinski does not use the same level of detail to describe an element of Claim 46, namely: *a program storage device readable by a computer, tangibly embodying a program of instructions executable by a computer to prepare data representative of an organization for use in processing*. Affects all claims.

Errors #24 through #27) Failure to acknowledge the fact that Bielinski does not use the same level of detail to describe an element of Claim 46, namely: *a program storage device readable by a computer, tangibly embodying a program of instructions executable by a computer to transform at least a portion of the data into a causal model of each of one or more categories of an organization value that identify and output a tangible value contribution of each of one or more elements of value to a current operation.* Affects all claims.

Errors #28 through #31) Failure to acknowledge the fact that Bielinski does not use the same level of detail to describe an element of Claim 46, namely: *a program storage device readable by a computer, tangibly embodying a program of instructions executable by a computer to transform at least a portion of the data into a causal model of each of one or more categories of an organization value that identify and output a tangible value contribution of each of one or more elements of value to a real option category of value.* Affects all claims.

Errors #32 through #35) Failure to acknowledge the fact that Bielinski does not use the same level of detail to describe an element of Claim 46 , namely: *a program storage device readable by a computer, tangibly embodying a program of instructions executable by a computer that reports the value contribution of the elements of value using an electronic display or a paper document.*

Error #36) Failure to acknowledge the fact that Bielinski does not use the same level of detail to describe an element of Claim 48, namely: *where a tangible value contribution for each of one or more elements of value to each of one or more categories of value further comprises a direct element contribution to a category of value net of any element of value impacts on other elements of value.*

Error #37) Failure to acknowledge the fact that Bielinski does not use the same level of detail to describe an element of Claim 53, namely: *where the calculated value for each element of value further comprises a value for a point in time within a sequential series of points in time.*

Error #38) Failure to acknowledge the fact that Bielinski does not use the same level of detail to describe an element of Claim 54, namely: *where the net relative contribution for each element of value to each category of value further comprises a net causal contribution.*

**Errors 39 through 42** It is well established that that: *"in relying upon the theory of inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art."* *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). In spite of this well known requirement, no explanation was provided regarding the inherency of the limitations of claim 46 (#39), claim 48 (#40), claim 53 (#41) and claim 54 (#42).

**Errors 43 through 150** It is well established that that: *"in order to anticipate a claimed invention, a prior art reference must enable one of ordinary skill in the art to make the invention without undue experimentation."* *Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323, 1336 (Fed. Cir. 2008) (citing *In re Omeprazole Patent Litig.*, 483 F.3d 1364, 1379 (Fed. Cir. 2007)). It is well known to those of average skill in the art that unlearning "known" methods is often the most difficult part of learning for people of all ages (see Evidence Appendix, page 110 for confirmation). Extensive and undue experimentation would be required to reveal the fact that the listed Bielinski methods have serious shortcomings and should be unlearned (or forgotten). Furthermore, replicating the functionality of the claimed invention would also require the addition of a number of new capabilities not described by Bielinski. Extensive and undue experimentation would be required to support all three steps. Errors in the rejection of claim 46, claim 48, claim 53 and claim 54 caused by the apparent failure to acknowledge the need for extensive experimentation include:

Errors #43 through #46) Failure to acknowledge the fact that extensive and undue experimentation would be required to unlearn the exclusive reliance on actual numbers to complete analyses taught by Bielinski.

Errors #47 through #50) Failure to acknowledge the fact that extensive and undue experimentation would be required to unlearn the exclusive reliance of cash flow to calculate enterprise value taught by Bielinski.

Errors #51 through #54) Failure to acknowledge the fact that extensive and undue experimentation would be required to unlearn the exclusive focus on factors that can be used to calculate actual cash flow that is taught by Bielinski.

Errors #55 through #58) Failure to acknowledge the fact that extensive and undue experimentation would be required to unlearn the exclusive use of linear models taught by Bielinski.

Errors #59 through #62) Failure to acknowledge the fact that extensive and undue experimentation would be required to unlearn the exclusive use of activities, counts, expenditures and summary financial measures for model inputs,

Errors #63 through #66) Failure to acknowledge the fact that extensive and undue experimentation would be required to unlearn the exclusive focus on historical financial data, and

Errors #67 through #70) Failure to acknowledge the fact that extensive and undue experimentation would be required to unlearn the exclusive reliance on the efficient market hypothesis.

Errors #71 through #150) Failure to acknowledge the fact that extensive and undue experimentation would be required to develop at least 20 new capabilities used in the claimed invention that are not inherently or explicitly described by Bielinski. Affects all claims.

The required experimentation would clearly be excessive and undue because the references disclosed to date do not support the development of any of the methods outlined above (i.e. errors 43 through 150).

**Errors 151 through 154** It is well established that: *the reference must not only disclose all elements of the claim within the four corners of the document, but it must also disclose those elements "arranged as in the claim" (Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 1548 (Fed. Cir. 1983)).* Missing elements were discussed under errors 1 through 19. Bielinski also fails to arrange elements as they are arranged in the claim. In particular, Bielinski uses a single spreadsheet to analyze enterprise cash flow (see Bielinski Table 1). By way of contrast, the claimed invention relies on a separate analysis of the current operation and real option categories of value. Affects claim 46 (#151), claim 48 (#152), claim 53 (#153) and claim 54 (#154).

**Errors 155 through 171** The claim rejections are based on 35 U.S.C. §102(b) which states: *A person shall be entitled to a patent unless the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States.* Errors in the rejection of claim 46, claim 48, claim 53 and claim 54 caused by the apparent failure to meet any of the statutory requirements for anticipation rejections include:

Errors #155 through #158) Failure to acknowledge the fact that the cited document fails to

describe any elements of the claimed invention. As detailed in the preceding discussion, the anticipation rejections appear to be based of a non-existent standard for anticipation “mentions some the same words as another document” instead of “describes the invention” as there is not one aspect of the rejected claims that was included in the cited document. It is also well established that the *“Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art.” In re Lowry, 32 F.3d 1579, 1582 (Fed. Cir. 1994).* As detailed under errors 1 through 941, the Examiner does not appear to have considered any of the limitations. Affects all claims.

Errors #159 through #163) Failure to acknowledge that those signing the relevant Office Actions apparently do not understand the relevant scientific and engineering principles. It is unlikely that anyone who understood the relevant scientific and engineering principles would attempt to reject the pending claims on the basis of the Bielinski reference. Affects all claims.

Errors #164 through #167) Failure to acknowledge the fact that the claim rejections are based on apparent misrepresentations regarding the teachings of the cited document. For example, the Examiner has stated that the Bielinski anticipates the development of a model of element of value impact on the current operation and real option categories of value. This is simply not true. Many other examples could be provided. Affects all claims.

Errors #168 through #171) Failure to acknowledge the particular meaning given to the term “element of value”. It is well established that *“words of the claim are generally given their ordinary and customary meaning, unless it appears from the written description that they were used differently by the applicant. See Teleflex Inc. v. Ficosa North America Corp., 299 F.3d 1313, 1325, 63 USPQ2d 1374, 1381 (Fed. Cir. 2002), Rexnord Corp. v. Laitram Corp., 274 F.3d 1336, 1342, 60 USPQ2d 1851, 1854 (Fed. Cir. 2001), and MPEP § 2111.01.* The term “element of value” was given a particular meaning (see lines 8 through 10 on page 19 of the specification). Affects all claims.

**Errors 172 through 179** – In *Dickinson v. Zurko*, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of U.S.P.T.O. findings are the standards set forth in the Administrative Procedure Act (“APA”) at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. Errors in the claim rejections caused by the apparent failure to meet any of

the requirements of the APA include:

Errors #172 through #175) Failure to acknowledge the fact that the claim rejections fail under the substantial evidence standard. Errors 1 through 171 clearly show that the relevant Office Action fails to provide even a scintilla of evidence to support the anticipation rejections of claim 46, claim 48, claim 53 and claim 54 and that as a result the rejections fail to meet the substantial evidence standard.

Error #176 through #179) Failure to acknowledge the fact that the claim rejections fail under the arbitrary and capricious standard. The Appellant respectfully submits that the anticipation rejection of claim 46, claim 48, claim 53 and claim 54 also fails to pass the arbitrary and capricious test for a number of reasons including the fact that:

- a) as detailed above, the references cited by the Examiner provide substantial evidence of novelty, non-obviousness and newness of the rejected claims (see errors 1 through 154);
- b) there is no rational connection between the agency fact findings and the statutory requirements for an anticipation rejection (see errors 155 through 171), and
- c) prior agency fact-findings have shown that 35 U.S.C. 102 and/or 35 U.S.C. 103 requirements for novelty are apparently not always applied during the prosecution and allowance of large company patent applications. This apparently unequal application of the law comprises an apparent violation of 35 USC 3.

Because the claim rejections do not meet either standard of the APA, the prima facie case of anticipation cannot be properly established.

Summarizing the above, the Appellant respectfully submits that the Examiner has failed to produce the evidence required to satisfy the requirements of the APA and/or establish a prima facie case of anticipation for a single claim. These failures provide additional evidence that the claimed inventions are new, novel and non-obvious.

**Issue 7 - Whether the invention described in claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 64, claim 65, claim 67, claim 68, claim 69, claim 70, claim 71, claim 72, claim 73 and claim 74 represents statutory subject matter under USC §101?**

The claims are patentable because the claim rejections are based on two hundred three (203) errors in the facts and in the law. Because of these errors the relevant Office Action failed to establish a prima facie case of non statutory subject matter for every rejected claim as detailed below.

**Errors 1 through 87** – It is well established “*the burden is on the USPTO to set forth a prima facie case of unpatentability. Therefore if USPTO personnel determine that it is more likely than not that the claimed subject matter falls outside all of the statutory categories, they must provide an explanation.*”(See, e.g., *In re Nuijten*, Docket no. 2006-1371 (Fed. Cir. Sept. 20, 2007)(slip. op. at 18)). Errors in the claim rejections caused by a failure to provide an explanation include:

**Errors #1 through #29)** Failure to explain how the claimed inventions can be completed using mental processes. In particular, the Appellant would like an explanation as to how an individual can complete the claimed analyses and how an individual creates and outputs a database using only mental processes. Affects all claims.

**Errors #30 through #58)** Failure to explain why the claims are rejected as being non statutory after considering the fact that the Supreme Court has specifically stated “[a] process may be patentable irrespective of the particular form of the instrumentalities used” (*Cochrane v. Deener*, 94 U. S. 780). Affects all claims.

**Errors #59 through #87)** Failure to explain why the claims are considered to be non statutory when the Supreme Court and the CAFC (*Bilski*) have both found the transformation of data regarding real world activities and/or objects into a different state or thing to be statutory subject matter.

In short, the complete absence of a logical explanation leads to the inevitable conclusion that the Examiner has failed to establish a prima facie case that would support a §101 rejection for a single claim.

**Errors 88 through 116** – Are errors in the claim rejections caused by a failure to acknowledge that the conclusory statement that is the sole basis for the claim rejections is demonstrably false. It is well known to those of average skill in the art that human beings cannot reliably process more than four variables at a time (see Evidence Appendix, pages 127 – 128 for confirmation). Those of average skill in the art will also recognize that claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 64, claim 65, claim 67, claim 68, claim 69, claim 72, claim 73 and claim 74 all involve the use of models that require the simultaneous manipulation of numbers of variables that are several orders of magnitude greater than the four variables a human can process with an acceptable degree of accuracy. In a similar fashion, claims 70 and 71 require the simultaneous manipulation of numbers of variables and working memory that are several orders of magnitude greater than four (See Graeme, Halford). Putting these facts together it is clear that the stated basis for the claim rejection is



demonstrably false and that the claimed inventions cannot be completed solely by the use of mental processes. Furthermore, the stated basis for these claim rejections adds to the substantial evidence that those authoring and/or approving the §101 rejections do not appear to have the capability of understanding the scientific and engineering principles applicable to the pertinent art. Affects all claims.

**Errors 117 through 145** –As noted in the Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility *“the Supreme Court noted that one example of a statutory “process” is where the process steps provide a transformation or reduction of an article to a different state or thing (Diehr, 450 U.S. at 183, 209 USPQ at 6).* In Alappat, the Court held that *“data, transformed by a machine” “to produce a smooth waveform display” “constituted a practical application of an abstract idea.” State Street, 149 F.3d at 1373.* In Arrhythmia, the Court held *“the transformation of electrocardiograph signals” “by a machine” “constituted a practical application of an abstract idea.” Id.* Likewise, in State Street, the Court held that *“the transformation of data” “by a machine” “into a final share price, constitutes a practical application of a mathematical algorithm.” Id.* Thus, while Diehr involved the transformation of a tangible object - curing synthetic rubber - the Court also regards the transformation of intangible subject matter to similarly be eligible, so long as data represent some real world activity. In re Bilski, 545 F.3d 943, 88 U.S.P.Q.2d 1385 (2008) generally follows these prior decisions and states that the data transformed by a process must represent an object or substance that physically exists. Errors in the claim rejections caused by a failure to recognize that the claimed inventions meet the requirements for statutory subject matter include:

**Errors #117 through #140)** A failure to acknowledge that claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 64, claim 65, claim 67, claim 68, claim 69 describe processes for transforming data representative of things that physically exist (i.e. a business, customers, vendors, etc.) into a different state or thing: a model of enterprise financial performance. As such they represent statutory subject matter. The model has utility in completing forecasts, analyzing business performance and simulating the impact of changes to the business. As discussed in detail in the summary of claimed subject matter, the transformation of data into a model comes after data representative of the business has been transformed into an integrated database.

Errors #141 through #142) A failure to acknowledge that claim 70 and claim 71 describe a process for transforming data representative of things that physically exist (i.e. a business, customers, vendors, etc.) into a different state or thing: an integrated database. As such they represent statutory subject matter. The database has utility in enabling forecast development, business performance analyses and simulations.

Errors #143 through #145) A failure to acknowledge that claim 72, claim 73 and claim 74 describe a machine for transforming data representative of things that physically exist (i.e. a business, customers, vendors, etc.) into a different state or thing: a model of enterprise financial performance. As such they represent statutory subject matter. The model has utility in completing forecasts, analyzing business performance and simulating the impact of changes to the business. As discussed in detail in the summary of claimed subject matter, the transformation of data into a model comes after data representative of the business has been transformed into an integrated database.

**Errors 146 through 203** – In *Dickinson v. Zurko*, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of USPTO findings are the standards set forth in the Administrative Procedure Act (“APA”) at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. Errors in the claim rejections caused by the apparent failure to meet any of the requirements of the APA include:

Errors #146 through #174) Failure to acknowledge the fact that the claim rejections fail under the substantial evidence standard. Errors 1 through 145 clearly show that the relevant Office Action fails to provide even a scintilla of evidence to support the non statutory subject matter rejection of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 64, claim 65, claim 67, claim 68, claim 69, claim 70, claim 71, claim 72, claim 73 and claim 74 and that as a result the rejections fail to meet the substantial evidence standard.

Errors #175 through #203) Failure to acknowledge the fact that the claim rejections fail under the arbitrary and capricious standard. The Appellant respectfully submits that the non statutory subject matter rejection of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 64, claim 65, claim 67, claim 68,

claim 69, claim 70, claim 71, claim 72, claim 73 and claim 74 also fails to pass the arbitrary and capricious test for a number of reasons including the fact that:

- a) no evidence has been provided to support the legal conclusion of non statutory subject matter (see errors 1 through 116),
- b) there is no rational connection between the statutory requirements for non statutory subject matter rejections and the agency fact findings (see errors 117 through 145), and
- c) prior agency fact-findings have shown that 35 U.S.C. 101 requirements for statutory subject matter are apparently not always considered during the prosecution and allowance of large company patent applications. This apparently unequal application of the law comprises an apparent violation of 35 USC 3.

Because the claim rejections do not meet either standard of the APA, the prima facie case of non statutory subject matter can not be properly established. The Appellant respectfully submits that the preceding discussion makes it clear that the claimed invention passes the two prong test and that the claims describe inventions that support a number of practical applications with substantial, specific utilities and that they therefore represent statutory subject matter.

**Issue 8 – Whether the invention described in claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71 are enabled under 35 USC 112, first paragraph?**

The claims are patentable because the claim rejections are based on almost a hundred errors in the facts and in the law. Because of these errors, the arguments presented by the Examiner fail to establish a prima facie case of a lack of enablement for every rejected claim as detailed below.

**Errors 1 through 28** – It is well established that *“A description as filed is presumed to be adequate; unless or until sufficient evidence or reasoning to the contrary has been presented by the examiner to rebut the presumption. See, e.g., In re Marzocchi, 439 F.2d 220, 224, 169 USPQ 367, 370 (CCPA 1971). The examiner, therefore, must have a reasonable basis to challenge the adequacy of the written description. The examiner has the initial burden of presenting by a preponderance of evidence why a person skilled in the art would not recognize in an applicant's disclosure a description of the invention defined by the claims. Wertheim, 541 F.2d at 263, 191 USPQ at 97. In rejecting a claim, the examiner must set forth express findings of fact regarding the above analysis which support the lack of written description conclusion. These findings should: (A) Identify the claim limitation at issue; and (B) Establish a prima facie case by providing reasons why a person skilled in the art at the time the application was filed*

would not have recognized that the inventor was in possession of the invention as claimed in view of the disclosure of the application as filed. A general allegation of "unpredictability in the art" is not a sufficient reason to support a rejection for lack of adequate written description." Furthermore, it is well established that "the test of enablement is whether one reasonably skilled in the art could make or use the invention from the disclosures in the patent coupled with information known in the art without undue experimentation." *United States v. Teletronics, Inc.*, 857 F.2d 778, 785, 8 USPQ2d 1217, 1223 (Fed. Cir. 1988). This has been the primary test of enablement since 1916 (see *Mineral Separation v. Hyde*, 242 U.S. 261, 270 (1916)). The determination that "undue experimentation" would have been needed to make and use the claimed invention is not a single, simple factual determination (*In re Wands*, 858 F.2d 731, 8 USPQ2d 1400 (Fed. Cir. 1988)). Factors which need to be considered include: the nature of the invention, the state of the prior art, the predictability or lack thereof in the art, the amount of direction or guidance present, the presence or absence of working examples, the breadth of the claims, the relative skill of those in the art and the quantity of experimentation needed (hereinafter referred to as the Wands factors). A conclusion of lack of enablement means that, based on the evidence regarding each of the above factors (the Wands factors), the specification, at the time the application was filed, would not have taught one skilled in the art how to make and/or use the full scope of the claimed invention without undue experimentation (*In re Wright*, 999 F.2d 1557, 1562, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993)). Errors in the claim rejections caused by the apparent failure to establish a prima facie case of a lack of enablement include:

Errors #1 through #7) – Is a failure to acknowledge that no evidence has been presented to support the rejection of claim 64 (#1), claim 65 (#2), claim 67 (#3), claim 68 (#4), claim 69 (#5), claim 70 (#6) and claim 71 (#7). As noted above, rejection under §112 first paragraph requires a preponderance of evidence and express findings of fact. In spite of this well known requirement, no facts have been identified and no evidence has been presented that excessive experimentation would be required and/or that the full scope of the claimed invention has not been described. In place of the required evidence, the Examiner has made conclusory statements that three phrases "an integrated database", "a physical object or substance" and "output said database" are allegedly not described in the specification.

Errors #8 through #14) Is a failure to acknowledge that the conclusory statements used to support the claim rejections are incorrect. The specification describes a process for developing an application database for an enterprise, a physical object. The application

database is the output of the process and it is an integrated database (see Evidence Appendix, pages 123 – 126). Furthermore, U.S. Patent 5,615,109 (which is incorporated by reference) also describes the development of an integrated database. Affects all claims

Errors #15 through #21) - Is a failure to acknowledge that the Wands factors have not been considered for claim 64 (#15), claim 65 (#16), claim 67 (#17), claim 68 (#18), claim 69 (#19), claim 70 (#20) and claim 71 (#21). As noted above, rejection under §112 first paragraph requires a consideration of the Wands factors. In spite of this well known requirement, the Examiner has not completed a single aspect of the required Wands factor analysis.

Errors #22 through #28) Is a failure to acknowledge the evidence that has been presented. Evidence that the Examiner has apparently ignored includes: a) the summary of claimed subject matter and b) a declarations submitted in support of this application, the declaration represents the only known independent review of the patent specification by someone with average skill in the relevant arts under either the pre or post KSR standards for determining the possession of said level of skill. Although the expert providing the declaration has considerable expertise in the data management, the Examiner has apparently chosen to ignore the contents of this declaration which completely rebuts the basis for the claim rejections (see Evidence Appendix, pages 123 – 126). Affects all claims.

Since the prima facie case to support the claim rejections has not been established, no rebuttal was (or is) required.

Errors 29 through 35 - Is a failure to acknowledge that *“there is no requirement that the words in the claim must match those used in the specification disclosure,”* and that the use of words in a claim that do not match those used in the specification does not comprise the incorporation of new matter (see *In re Robert Skvorecz*, CAFC 2008-1221). This is particularly true when the term describes one of a plurality of modes for utilizing an invention described in the specification as it is well established that *“the enablement requirement is met if the description enables any mode of making and using the claimed invention”* (see *Invitrogen Corp. v. Clontech Labs, Inc.*, 429 F.3d 1052, 1058 (Fed. Cir. 2005) where the Court referenced *Engel Industries, Inc. v. Lockformer Co.* 946 F.2d 1528 (Fed. Cir. 1991)). Affects all claims.

Errors 36 through 56 – The claim rejections are based on 35 U.S.C. §112 first paragraph

which states: *The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.* Errors in the claim rejections caused by the apparent failure to meet any of the statutory requirements for an enablement rejection include:

Errors #36 through #42) Failure to acknowledge the fact that the specification meets the requirements of 35 U.S.C. §112 first paragraph. As illustrated by the preceding discussion of errors 1 through 35, the enablement rejection appears to be based of a non-existent standard for written description enablement. Affects all claims.

Errors #43 through #49) Failure to acknowledge the fact that the claim rejections have been authored by individuals who appear to lack the level of skill in the art required to author such rejections. It is well established that the “*hypothetical ‘person having ordinary skill in the art’ to which the claimed subject matter pertains would, of necessity have the capability of understanding the scientific and engineering principles applicable to the pertinent art*” *Ex parte Hiyamizu*, 10 USPQ2d 1393, 1394 (Bd. Pat. App. & Inter. 1988). It is unlikely that anyone who understood the scientific and engineering principles applicable to the pertinent art would ever suggest Bielinski, Davis or Srivastava as a reference in support of an obviousness rejection for the claimed inventions for the reasons described previously. Another indication of the Examiner’s apparent lack of understanding of the scientific and engineering principles applicable to the pertinent art can be found in the nearly two thousand (2,000) errors identified in the claim rejections in the instant Appeal Brief. Affects all claims.

Errors #50 through #56) – Is a failure to acknowledge that a the alleged lack of enablement associated may be a product of the Examiner’s apparent lack of understanding of the relevant rules and statutes. The instant application incorporated a number of applications by reference. In accordance with the relevant rules, the proper response to the identification of an allegedly unsupported claim limitation would be to first require that pertinent material from the cross referenced patent applications be added to the specification instead of issuing an arbitrary and capricious rejection for a lack of enablement (see 37 CFR 1.157 and MPEP 608.01(p) and MPEP 2163.07(b) for details re: U.S.P.T.O. policy in this regard). Affects all claims.

**Errors 57 through 70** – In *Dickinson v. Zurko*, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the

Supreme Court held that the appropriate standard of review of U.S.P.T.O. findings are the standards set forth in the Administrative Procedure Act ("APA") at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. Errors in the claim rejections caused by the apparent failure to meet any of the requirements of the APA include:

Errors #57 through #63) Failure to acknowledge the fact that the claim rejections fail under the substantial evidence standard. Errors 1 through 56 clearly show that the relevant Office Action fails to provide even a scintilla of evidence to support the lack of enablement rejections of claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71 and that as a result the rejections fail to meet the substantial evidence standard.

Errors #64 through #70) Failure to acknowledge the fact that the claim rejections fail under the arbitrary and capricious standard. The Appellant respectfully submits that the enablement rejection of claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71 also fails to pass the arbitrary and capricious test for a number of reasons including the fact that:

- a) as detailed above under errors 1 through 35, there is no evidence to support the rejection of a single claim;
- b) there is no rational connection between the statutory requirements for enablement, the agency fact findings and the rejection of the claims (see errors 36 through 70), and
- c) prior agency fact-findings have shown that 35 U.S.C. 112 first paragraph requirements for enablement are apparently not always considered during the prosecution and allowance of large company patent applications. This apparently unequal application of the law comprises an apparent violation of 35 USC 3.

Because the claim rejections do not meet either standard of the APA, the prima facie case of a lack of enablement cannot be properly established.

Summarizing the above, the Appellant respectfully submits that the Examiner has failed to produce the evidence required to satisfy the requirements of the APA and/or establish a prima facie case of a lack of enablement for a single claim.

**Issue 9 – Whether claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 70 and/or claim 71 are indefinite under 35 USC 112, second paragraph?**

The claims are patentable because the claim rejections are based on almost a hundred errors in the facts and in the law. Because of these errors, the arguments presented by the Examiner fail to establish a prima facie case of claim indefiniteness for every rejected claim as detailed below.

**Errors 1 through 44** – It is well established that: *the definiteness of claim language must be analyzed, not in a vacuum, but in light of: (A) The content of the particular application disclosure; (B) The teachings of the prior art; and (C) The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made. In reviewing a claim for compliance with 35 U.S.C. 112, second paragraph, the examiner must consider the claim as a whole to determine whether the claim apprises one of ordinary skill in the art of its scope and, therefore, serves the notice function required by 35 U.S.C. 112, second paragraph, by providing clear warning to others as to what constitutes infringement of the patent. See, e.g., Solomon v. Kimberly-Clark Corp., 216 F.3d 1372, 1379, 55 USPQ2d 1279, 1283 (Fed. Cir. 2000). See also In re Larsen, No. 01-1092 (Fed. Cir. May 9, 2001).* Errors in the claim rejections caused by the apparent failure to establish a prima facie case of claim indefiniteness include:

**Errors #1 through #11)** – Is a failure to acknowledge that no evidence has been provided to indicate that rejected: claim 55 (#1), claim 56 (#2), claim 57 (#3), claim 58 (#4), claim 59 (#5), claim 60 (#6), claim 61 (#7), claim 62 (#8), claim 63 (#9), claim 70 (#10) and claim 71 (#11) do not *particularly point out or distinctly claim the disclosed invention to someone of average skill in the art*. In particular, all the claim rejections are based on conclusory statements made by an individual who does not appear to have the requisite level of skill in the art. Furthermore, the term “identified data” which the Examiner has cited as being indefinite is not included in any of the rejected claims.

**Errors #12 through #22)** - Is a failure to acknowledge that *“there is no requirement that the words in the claim must match those used in the specification disclosure”* and that the use of words in a claim that do not match those used in the specification does not comprise the incorporation of new matter (see *In re Robert Skvorecz, CAFC 2008-1221*). Furthermore, there was and is a related failure to acknowledge that rejected: claim 55 (#12), claim 56 (#13), claim 57 (#14), claim 58 (#15), claim 59 (#16), claim 60 (#17), claim 61 (#18), claim 62 (#19), claim 63 (#20), claim 70 (#21) and claim 71 (#22) do not contain any terms that do not have proper antecedent basis where such basis is not otherwise present by implication or the meaning is not reasonably ascertainable (*Halliburton Energy Services, Inc. v. M-I LLC, 514 F.3d 1244, 1255, 85 USPQ2d 1663 (Fed. Cir. 2008)* and



Halliburton, 514 F.3d at 1246, 85 USPQ2d at 1658 (Citing Biomedino, LLC v. Waters Techs. Corp., 490 F.3d 946, 950 (Fed. Cir, 2007).

Errors #23 through #33) – Is a failure to acknowledge that the Examiner has failed to establish a prima facie case of indefiniteness by failing to consider the rejected: claim 55 (#23), claim 56 (#24), claim 57 (#25), claim 58 (#26), claim 59 (#27), claim 60 (#28), claim 61 (#29), claim 62 (#30), claim 63 (#31), claim 70 (#32) and claim 71 (#33) as a whole. The complete claims provide additional context that helps define the metes and bounds of the claimed invention.

Errors #34 through #44) - Is a failure to acknowledge the meaning of the one allegedly confusing term identified by the Examiner that is actually used in a claim (“output a database”) and all the other terms used in the claims have well recognized meanings which allows the reader to infer the meaning of the entire phrase with reasonable confidence (see *Bancorp Services, L.L.C. v. Hartford Life Ins. Co.*, 359 F.3d 1367, 1372, 69 USPQ2d 1996, 1999-2000 (Fed. Cir. 2004)). Evidence to support the first assertion can be found in a declaration included in the Evidence Appendix. The declaration represents the only known independent review of the instant patent specification and claims by an individual with average skill in the relevant arts under either the pre or post KSR standards for determining the possession of said level of skill. It completely rebuts the Examiner’s contentions regarding the claims (see Evidence Appendix, pages 123 – 126). Affects all claims.

**Errors 45 through 66** – The claim rejections are based on 35 U.S.C. §112 second paragraph which states: *The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.* Errors in the claim rejections caused by the apparent failure to meet any of the statutory requirements for an indefinite claim rejection include:

Errors #45 through #55) Failure to acknowledge the fact that the rejected claims meet the requirements of 35 U.S.C. §112 second paragraph. As illustrated by the preceding discussion of errors 1 through 44, the enablement rejection appears to be based on an unknown and non-existent standard for claim definiteness. Affects all claims.

Errors #56 through #66) Failure to acknowledge the fact that the claim rejections have been authored by individuals who appear to lack the level of skill in the art required to author such rejections. It is well established that: *the definiteness of claim language must be analyzed, not in a vacuum, but in light of ... The claim interpretation that would be*

*given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made.* It is also well established that the “*hypothetical ‘person having ordinary skill in the art’ to which the claimed subject matter pertains would, of necessity have the capability of understanding the scientific and engineering principles applicable to the pertinent art*” *Ex parte Hiyamizu*, 10 USPQ2d 1393, 1394 (Bd. Pat. App. & Inter. 1988). It is unlikely that anyone who understood the scientific and engineering principles applicable to the pertinent art would ever suggest Bielinski, Davis and/or Srivastava references in support of an obviousness rejection for the claimed inventions for the reasons described previously. Another indication of the apparent lack of understanding of the scientific and engineering principles applicable to the pertinent art is the arbitrary and capricious rejection of the pending claims for alleged indefiniteness.

**Errors 67 through 88** – In *Dickinson v. Zurko*, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of U.S.P.T.O. findings are the standards set forth in the Administrative Procedure Act (“APA”) at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. Errors in the claim rejections caused by the apparent failure to meet any of the requirements of the APA include:

**Errors #67 through #77)** Failure to acknowledge the fact that the claim rejections fail under the substantial evidence standard. Errors 1 through error 66 clearly show that the relevant Office Action fails to provide even a scintilla of evidence to support the rejections for indefiniteness for claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 70 and/or claim 71 and that as a result the rejections fail to meet the substantial evidence standard.

**Errors #78 through #88)** Failure to acknowledge the fact that the claim rejections fail under the arbitrary and capricious standard. The Appellant respectfully submits that the rejection of claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 70 and/or claim 71 for indefiniteness also fails to pass the arbitrary and capricious test for a number of reasons including the fact that:

- a) as detailed above under errors 1 through 44, there is no evidence that the claims are indefinite;
- b) there is no rational connection between the statutory requirements for claim definiteness, the agency fact findings and the rejection of the claims (see errors 45 through 66),

- c) there is no rational connection between the rejection for claim indefiniteness and the prior agency fact findings associated with U.S. Patent Application 10/166,758, and
- d) prior agency fact-findings have shown that 35 U.S.C. 112 requirements for written description are apparently not always considered during the prosecution and allowance of large company patent applications. This apparently unequal application of the law comprises an apparent violation of 35 USC 3.

Because the claim rejections do not meet either standard of the APA, the prima facie case of claim indefiniteness cannot be properly established.

Summarizing the above, the Appellant respectfully submits that the Examiner has failed to produce the evidence required to satisfy the requirements of the APA and/or establish a prima facie case that a single claim is indefinite.

## **8. Conclusion**

The Appellant notes that with respect to the prosecution of the instant application, it appears that the U.S.P.T.O. has not fully complied with the requirements set forth in the APA, 35 U.S.C. 3 and 35 U.S.C. 131. A valid patent application rejection requires substantial evidence (Gartside, 203 F.3d at 1312). As described in the preceding section, the March 31, 2009 Office Action does not contain any evidence that would support the rejection of a single claim. However, related appeals and the March 31, 2009 Office Action for the instant application do provide substantial evidence that: those authoring/signing the Office Action do not appear to understand any of the scientific and/or engineering principles applicable to the pertinent art, those authoring the Office Action do not adhere to any of the well established requirements for authoring valid claim rejections, and that those authoring the Office Action appear to have based the claim rejections on legal standards that are not applied during the review and allowance of similar applications filed by larger companies.

For the reasons detailed above, the Appellant respectfully but forcefully contends that each claim is patentable. Therefore, reversal of all rejections is courteously solicited.

Respectfully submitted,  
Asset Trust, Inc.

/B.J. Bennett/

B.J. Bennett, President  
Dated: November 6, 2009

## 9. Claims Appendix

36. A computer implemented enterprise method, comprising:

preparing data representative of an enterprise for use in processing, and  
transforming at least a portion of the data into a model of an enterprise market value by an element and category of value by completing a series of multivariate analyses that utilizes said data

where the categories of value are selected from the group consisting of current operation, real option, market sentiment and combinations thereof,

where the model of enterprise market value identifies and outputs a tangible contribution of each element of value to each category of value, and

where the elements of value are selected from the group consisting of alliances, brands, channels, customers, employees, intellectual property, partnerships, processes, vendors and combinations thereof.

37. The method of claim 36 that further comprises completing activities selected from the group consisting of: identifying a set of changes that will optimize an enterprise market value, quantifying a future enterprise market value, creating a management report, valuing an enterprise market sentiment, calculating a real option discount rate, valuing a real option, and valuing a share of enterprise stock.

38. The method of claim 37 where a financial performance optimization further comprises identifying one or more changes that will optimize one or more aspects of financial performance where said aspects of financial performance are selected from the group consisting of revenue, expense, capital change, cash flow, real option value, future market value, market sentiment value, market value and combinations thereof.

39. The method of claim 36 wherein the method further comprises completing a series of multivariate analyses that are selected from the group consisting of identifying one or more previously unknown item performance indicators, discovering one or more previously unknown value drivers, identifying one or more previously unknown relationships between one or more value drivers, identifying one or more previously unknown relationships between one or more elements of value, quantifying one or more inter-relationships between value drivers, quantifying one or more impacts between elements of value, developing one or more composite variables,

developing one or more vectors, developing one or more causal element impact summaries, identifying a best fit combination of a predictive model algorithm and one or more element of value impact summaries for modeling enterprise market value and each of the components of value, determining a net element impact for each category of value, determining a relative strength of the elements of value between two or more enterprises, developing one or more real option discount rates, calculating one or more real option values, calculating an enterprise market sentiment value by element and combinations thereof.

40. The method of claim 39 wherein a predictive model algorithm is selected from the group consisting of neural network; classification and regression tree; generalized autoregressive conditional heteroskedasticity, regression; generalized additive; redundant regression network; rough-set analysis; Bayesian; multivariate adaptive regression spline and support vector method.

41. The method of claim 36 wherein data representative of an enterprise are obtained from systems selected from the group consisting of advanced financial systems, basic financial systems, alliance management systems, brand management systems, customer relationship management systems, channel management systems, estimating systems, intellectual property management systems, process management systems, supply chain management systems, vendor management systems, operation management systems, sales management systems, human resource systems, accounts receivable systems, accounts payable systems, capital asset systems, inventory systems, invoicing systems, payroll systems, purchasing systems, web site systems, the Internet, external databases and combinations thereof.

42. The method of claim 36 wherein the method further comprises using one or more composite applications to complete the processing.

43. The method of claim 36 wherein a model of enterprise market value further comprises a combination of component and category of value models selected from the group consisting of up to three predictive component of value models, a real option discount rate model, a real option valuation model, a market sentiment model by element of value and combinations thereof.

44. The method of claim 36 where preparing transaction data for use in processing further comprises integrating said data in accordance with a common schema where the common schema is defined by a CORBA metadata or an xml metadata.

45. The method of claim 36 that further comprises identifying one or more changes that will optimize a future market value portion of said enterprise market value.

46. A program storage device readable by a computer, tangibly embodying a program of instructions executable by a computer to perform an element method, comprising:

- preparing data representative of an organization for use in processing,
- transforming at least a portion of the data into a causal model of each of one or more categories of an organization value that identify and output a tangible value contribution of each of one or more elements of value to a current operation and a real option category of value,
- and
- reporting the value contribution of the elements of value using an electronic display or a paper document.

47. The program storage device of claim 46 where elements of value are selected from the group consisting of alliances, brands, channels, customers, customer relationships, employees, intellectual property, partnerships, processes, production equipment, vendors and vendor relationships, and combinations thereof.

48. The program storage device of claim 46 where a tangible value contribution for each of one or more elements of value to each of one or more categories of value further comprises a direct element contribution to a category of value net of any element of value impacts on other elements of value.

49. The program storage device of claim 46 where determining a value contribution for each of one or more elements of value to a real option category of value further comprises:

- identifying one or more elements of value that make a causal contribution to an organization market value,
- computing a difference between a real option value calculated using the company cost of capital as the discount rate and a value calculated using a real option discount rate

comprised of a base discount rate plus a risk factor for each element of value that makes a causal contribution to organization market value; and  
assigning the value difference to the different elements of value based on their relative contribution to a calculated difference in the two discount rates.

50. The program storage device of claim 46 where the element of value contributions are identified by learning from the data.

51. The program storage device of claim 46 wherein the discount rate for a real option valuation comprises a base discount rate plus a risk factor for each element of value that makes a causal contribution to an organization market value.

52. The program storage device of claim 46 where modeling enterprise financial performance further comprises:

- a) identifying one or more value drivers for each element of value,
- b) developing one or more element impact summaries from said value drivers for market value and each component of value,
- c) identifying a best fit combination of element impact summaries and predictive model algorithm for modeling market value and each component of value,
- d) determining a relative strength for each of the elements of value causal to market value change vis a vis competitors,
- e) calculating a real option discount rate using the relative element strength information for the elements that support the real option,
- f) calculating a real option value and identifying a contribution to real option value by element of value using said real option discount rate, and
- g) identifying a net element contribution to enterprise market value by category of value by combining the results from the processing completed in steps a through f.

53. The program storage device of claim 46 where the calculated value for each element of value further comprises a value for a point in time within a sequential series of points in time.

54. The program storage device of claim 46 wherein the net relative contribution for each element of value to each category of value further comprises a net causal contribution.



55. A computer implemented future market value method, comprising:  
preparing data representative of an organization for use in processing, and  
transforming at least a portion of the data into a causal model of each of one or more categories of an organization value that calculate and output a tangible value contribution of each of one or more elements of value to a future market value and each of the categories of organization value  
where the categories of value comprise a current operation and a category of value selected from the group consisting of real options, market sentiment and combinations thereof, and  
where the elements of value are selected from the group consisting of alliances, brands, channels, customers, customer relationships, employees, intellectual property, partnerships, processes, vendors and combinations thereof.
56. The method of claim 55 wherein the discount rate for a real option valuation comprises a base discount rate plus a risk factor for each element of value that is causal to an organization market value.
57. The method of claim 55 that is enabled by the use of a flexible system architecture where said architecture further comprises data that has been integrated in accordance with a common xml schema and independent components of application software that can be combined to process said data as required to produce useful results.
58. The method of claim 55 where a net contribution for each of one or more elements of value to each of one or more categories of value further comprises a direct element contribution to a category of value net of any element impacts on other elements of value within said category of value.
59. The method of claim 55 where a causal model of an element of value contribution to an organization value further comprises a plurality of models selected from the group consisting of predictive component of value models, predictive market value models, relative element strength models, real option discount rate models, real option valuation models, market sentiment models and combinations thereof.

60. The method of claim 55 where a net contribution for each of one or more elements of value further comprises a direct contribution to a value of a category of value net of any impact on other elements of value.

61. The method of claim 55 where the one or more categories of value are selected from the group consisting of current operation, real option, market sentiment and combinations thereof.

62. The method of claim 55 where the future market value portion of organization market value further comprises a summation of values selected from the group consisting of the real option value, the portion of current operation value caused by elements of value, the portion of market sentiment value caused by elements of value and combinations thereof.

63. The method of claim 55 where the value driver changes that will optimize future market value are identified by algorithms selected from the group consisting of monte carlo algorithms, genetic algorithms, multi criteria optimization algorithms and combinations thereof.

64. A composite application method for data processing, comprising:

using two or more independent components of application software to produce one or more useful results by transforming data representative of a physical object or substance into a predictive model that has a utility in managing or monitoring a real world activity of said object or substance

where said data has been aggregated from two or more systems in accordance with a common model or schema defined by an xml metadata standard.

65. The method of claim 64 where the independent components of application software can be flexibly combined as required to support the development of one or more useful results.

67. The method of claim 64 where the independent components of application software complete processing selected from the group consisting of: analysis, attribute derivation, capitalization, causal analysis, classification, clustering, count linkages, data acquisition, data conversion, data storage, data transformation, element life estimation, indicator selection, induction, keyword counting, keyword match identification, locate linkages, relative strength determination, statistical learning, valuation and vector generation.

68. The method of claim 64 that produces useful results selected from the group consisting of: element contribution determination, element impact quantification, element valuation, enterprise financial performance analysis, enterprise financial performance optimization, enterprise financial performance simulation, future market value optimization, future market value quantification, management reporting, real option discount rate calculation, real option valuation, share price valuation, and sub-element clustering.

69. The method of claim 64 where two or more systems are selected from the group consisting of accounts receivable systems, accounts payable systems, advanced financial systems, basic financial systems, alliance management systems, brand management systems, customer relationship management systems, channel management systems, estimating systems, intellectual property management systems, process management systems, supply chain management systems, vendor management systems, operation management systems, sales management systems, human resource systems, capital asset systems, inventory systems, invoicing systems, payroll systems, purchasing systems, web site management systems, the Internet, external databases and combinations thereof.

70. A computer implemented data processing method, comprising:

Integrating, converting and storing data representative of an organization from a plurality of disparate sources in accordance with a common xml schema in order to transform said data into an integrated database, and

outputting said database

where a set of integration and conversion rules are established using a metadata and conversion rules window and saved in metadata mapping table.

71. The data processing method of claim 70 where each of one or more tables in an application database further comprise one axis that is defined by one or more time periods that require data and another axis that is defined by one or more data categories selected from the group consisting of components of value, sub components of value, known value drivers, elements of value, non-relevant attributes and combinations thereof.

72. An organization system, comprising a computer with a processor having circuitry to execute instructions; a storage device available to said processor with sequences of instructions stored

therein, which when executed cause the processor to complete a computer implemented market value accounting method, comprising:

- preparing a plurality of data representative of an organization for use in processing,
- transforming at least a portion of the data into a model of each of one or more categories of an organization value that identify and output a tangible contribution of each of one or more elements of value to the categories of organization value by completing a series of analyses where the categories of value further comprise a current operation category of value and a category of value selected from the group consisting of real option, market sentiment and combinations thereof,
- using the tangible contribution for each element of value to identify a market value for each element of value, and
- reporting the value of each element of value in a balance sheet format
  - where the reported value is a value for a specific point in time within a sequential series of points in time.

73. The system of claim 72, wherein the method further comprises including a value for one or more financial assets in a report with a balance sheet format.

74. The system of claim 72 that further comprises wherein the method further comprises:

- tracking a change in a value of each of one or more elements of value over time, and
- including the calculated changes in value of each element of value in an income statement or a cash flow statement.

75. The system of claim 72, wherein the elements of value are customers and elements of value selected from the group consisting of alliances, brands, channels, employees, intellectual property, partnerships, processes, vendors and combinations thereof.

## **10. Evidence Appendix**

Page 110	Science News reference received June 29, 2009
Pages 111 – 114	Declaration for 10/743,616 reviewed October 17, 2008
Pages 115 – 119	Declaration for 10/287,586 received June 1, 2009
Pages 120 – 122	Declaration for 10/743,616 received October 17, 2008
Pages 123 – 126	Declaration for 09/764,068 received May 13, 2009
Pages 127 – 128	PhysOrg reference reviewed November 23, 2007

## GERONTOLOGY

# Unlearning Is Problem

**Jobs that require new techniques become progressively harder for those over 30 to learn to do satisfactorily, suggesting that tasks requiring speed and unlearning are unsuitable.**

► A BIGGER PROBLEM for older people who want to go on working is not learning new things so much as unlearning things that they have learned in the past.

Studies showing this have been made by Dr. Jack Botwinick, psychologist of the Clinical Center, National Institutes of Health, Bethesda, Md.

If what you have been doing is unlike what you are going to do in the future, you will have to unlearn a good deal of what you have been doing, Dr. Botwinick pointed out. This problem of unlearning, which is the biggest problem of learning new things, is true even at 30 and more so at ages 40, 50, 60 and on into the higher ages.

A person past 60 can do well on his own until he gets to a late age, but if there is increasing management policy for automation, for example, requiring the man to learn something new for his job, unlearning what he was doing very well may be the biggest problem.

A more familiar example that Dr. Botwinick gave was that of an older person learning to drive a non-gearshift automobile. He can do it, but it takes longer for the older person to stop reaching for the clutch than for a younger person learning the same thing.

A process of adaptation is related to the process of learning and unlearning. What has been adequate and appropriate at one time, but is no longer so, must be eliminated. The older the person, the harder it is to eliminate inappropriate or inadequate behavior, because, again, it involves an unlearning process.

Implications of the situation's social aspects are that older people should be able to do well if they continue doing what they have been doing, in the way of a job or other activities.

This is particularly true if the older person is a superior person, and if what he does involves verbal material.

For example, a person who works in teaching, unless he has to learn new processes and new methods of teaching, should be able to go on doing a good job as he gets older, whereas a person whose work involves manual or other kinds of physical activity may have more difficulty as he gets older.

Every living creature gets slower as he gets older, man is not the only animal that slows down with age, Dr. Botwinick said.

The group studying the aging process at the Clinical Center think the slowing is not only a question of muscles and a nerve reaction, but also a matter of the thinking

process, as well as of complex behavior and skill.

This means, Dr. Botwinick said, that jobs requiring speed and unlearning are not suitable for older persons, whereas jobs requiring accuracy and recurring repetitive processes are work at which older people will do relatively well.

Science News Letter, February 4, 1956

## TECHNOLOGY

## New Transistor Operates At Very High Frequencies

► A NEW TRANSISTOR that operates at frequencies three times higher than others recently announced has been developed.

Because of its very high frequency characteristics, the transistor is expected to be widely used in guided missiles and electronic "brains."

Heart of the tiny amplifying device is

the center layer, or "base," which is only 50-millionths of an inch thick.

It is made at Bell Telephone Laboratories in New York by a new fabricating method that uses the process of diffusion to control minute amounts of impurities sandwiched onto the base layer.

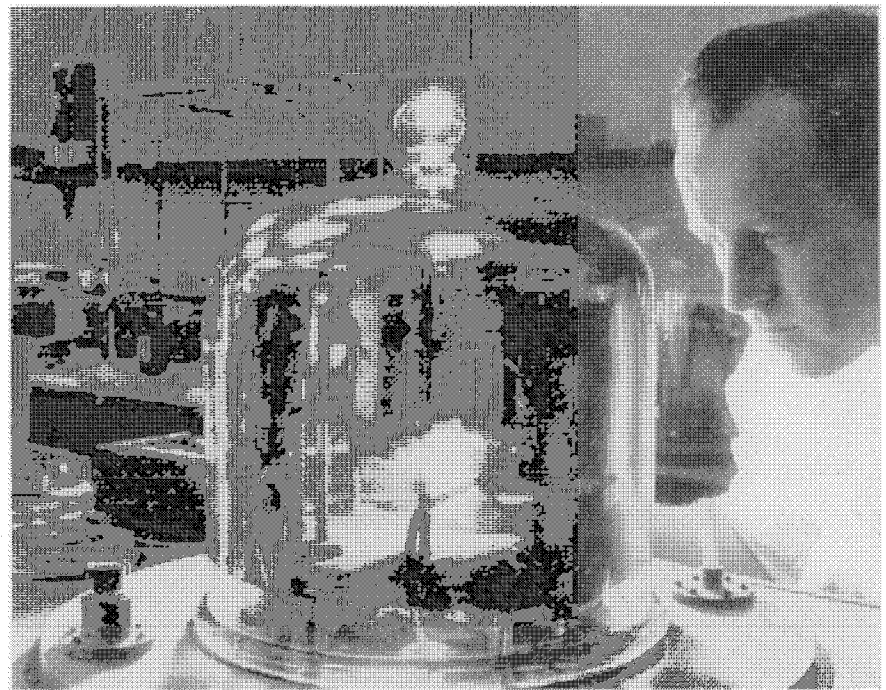
The narrower the base layer can be made, the higher the frequency at which the transistor will operate.

Transistors are widely used to replace vacuum tubes as low-frequency amplifiers, and the newly developed device broadens their field of application to include both black and white and color television transmission as well as missiles and computers.

Experimental units of the new device have amplified by 100 to one currents across a band 20,000,000 cycles wide. Either amplification or the number of communication channels can be made three times that of other transistors. When the frequency band is cut in half, power amplification is doubled. Available transistors have a frequency cut-off of up to ten megacycles, while the new ones work to 600 megacycles.

C. A. Lee of Bell Laboratories perfected the techniques of sandwiching with germanium. C. S. Fuller and M. Tanenbaum have applied the diffusion technique in making the new transistor from silicon. Dr. William Shockley and George C. Dacey directed the work leading to the development.

Science News Letter, February 4, 1956



**MAKING TRANSISTOR BY DIFFUSION**—Electrical contacts are being made to germanium by vaporizing a metal onto the surface, using the process of diffusion to control the amount of impurities. The germanium bar is under vacuum in the jar while a Bell Telephone Laboratories technician performs one of the operations in making the new transistor, which shows great promise for use at very high frequencies.

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Serial No.: 10/743,616

Applicant: Jeff S. Eder

Filed: March 16, 2002

Examiner: Jennifer Liversedge

Art Unit: 3692

Docket No.: AR - 61

Customer No: 53787

**DECLARATION UNDER RULE 132**

I, Dr. Peter Brous, do hereby declare and say:

My home address is 17221 NE 8th Street, Bellevue, WA 98008. I have a B.S. degree in Finance from the University of Connecticut and a PhD in Finance from the University of Oregon.

I have worked in the finance field for 26 years, concentrating in the areas of corporate performance measures, business valuation, capital budgeting, and real option analysis. I have been a professor of finance at Albers School of Business and Economics at Seattle University for 16 years and was recently honored to hold the Dr. Khalil Dibee Endowed Chair.

I further declare that I do not have any direct affiliation with the application owner, Asset Reliance, Inc or its licensee Kantrak, Inc. I previously met the inventor, who is now the President of Kantrak, Inc. briefly on October 16, 2007.

On October 25, 2007, I was given a copy of U.S. Patent Application 10/743,616 entitled "A performance management platform" filed in the United States Patent Office on March 16, 2002. Until that time I had not read the patent application. I have studied the entire specification in order to closely analyze the claims and drawings. I am familiar with the language of the claims and conversant with the scope thereof. I understand the invention as claimed.

On September 29, 2008 I was given a copy of "the 1986-1988 Stock Market Investor Sentiment or Fundamentals", by Michael N. Baur, Socorro Quintero and Eric Stevens published in Managerial and Decision Economics, Vol. 17, No. 3 (May - Jun., 1996). Until that time I had not read the article or discussed it with anyone. However, I have read many articles on the subject of market value and market sentiment. I have a strong understanding of the concepts of market value and market sentiment and have been teaching these concepts for over 10 years. I have studied the entire article and I am totally familiar with the language of the article with the scope thereof.

Based on my experience and education in the field of finance, I have concluded that the article by Baur et al. (hereinafter, the Baur article) has no relevance to the market sentiment calculation and analysis described in patent application 10/743,616. There are several reasons for this.

1. Patent application 10/743,616 describes a method for calculating and analyzing market sentiment for a single firm. The Baur article describes an attempt to determine if investor sentiment related to the market as a whole had an effect on changes in prices for the S&P 500 as a whole during the period from 1986-1988;
2. Patent application 10/743,616 defines market sentiment for a single firm as the difference between the market value of firm's equity and debt and the value of the firm's current operation, real options, excess financial assets and derivatives. The Baur article does not analyze the difference the market value of S&P 500's equity and debt



and the value of the S&P 500's current operation, real options, excess financial assets and derivatives as it only attempts to analyze changes in prices;

3. Patent application 10/743,616 teaches the analysis of the market sentiment level calculated for a firm using the method described in item 2 in order to identify the elements of value and/or external factors that contribute to the calculated levels. The Baur article does not teach or suggest anything about identifying the elements of value and/or external factors that contribute to market sentiment or investor sentiment;

4. Patent application 10/743,616 describes a method for calculating and analyzing market sentiment for a single firm at a specific point in time. The Baur article describes an attempt to determine if changes in investor sentiment related to the market as a whole affects weekly changes in prices for the S&P 500 as a whole over a period of several years;

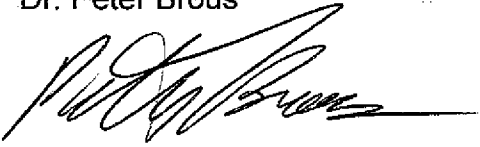
5. The Baur article cannot be used to make any inferences about investor sentiment (or market sentiment) at the firm level because increases in investor sentiment for some firms in the S&P 500 could offset decreases in investor sentiment for other firms within the S&P 500 over the time period being analyzed;

6. Patent application 10/743,616 does not teach or suggest anything about identifying a proxy for market sentiment for the market as a whole. The Baur article relies on an assumption that a measure of the change in the discount percentage on closed end funds is a proxy for investor sentiment related to the market as a whole. The Baur article also acknowledges that changes in closed end fund discounts may not be the correct proxy for measuring general investor sentiment;

7. The only conclusion that can reasonably be drawn from the Baur article is that the assumed proxy for general investor sentiment (described in item 6) did not have a significant statistical relationship to the observed price changes for the S&P 500 between 1986 and 1988.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Dr. Peter Brous

A handwritten signature in black ink, appearing to read 'Peter Brous', with a stylized, flowing script.

Date: October 17, 2008

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Serial No.: 10/287,586  
Applicant: Jeff S. Eder  
Filed: November 5, 2002  
Examiner: Yehdegga Retta  
Art Unit: 3693  
Docket No.: AR - 38  
Customer No: 53787

**DECLARATION UNDER RULE 132**

I, Rick Rauenzahn, do hereby declare and say:

My home address is 529 Calle don Leandro, Espanola, New Mexico. I have a B.S. degree in chemical engineering from Lehigh University, an S.M. degree in chemical engineering from The Massachusetts Institute of Technology and a Ph.D. in chemical engineering from The Massachusetts Institute of Technology. I have worked in the mathematical modeling field for 26 years concentrating in the disciplines of fluid mechanics, turbulence modeling, numerical methods for partial differential equations, radiation hydrodynamics, and strength of materials. I also have extensive knowledge of computer system administration, particularly for Windows-based, Linux, and UNIX systems. I have been employed by Los Alamos National Laboratory and Molten Metal Technologies for the past 25 years.

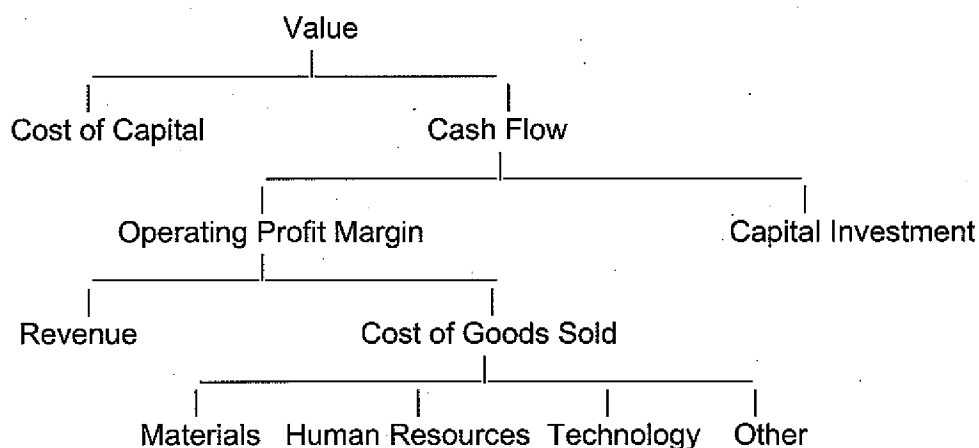
I further declare that I do not have any direct affiliation with the application owner, Asset Reliance, Inc. or with its licensee Kantrak, Inc. As described in prior declarations I have met the inventor who is the President of Kantrak.

On November 26, 2008 I was given a copy of "How to sort out the premium drivers of post-deal value" from Mergers and Acquisitions from July/August 1993, Vol. 28, Iss.1; pg. 33, 5 pgs by Daniel W. Bielinski (hereinafter, Bielinski), 'Neural Networks Enter the World of Management Accounting'; Management Accounting; Montvale, NJ; May 1995, 5 pages, by Carol Brown, James Coakley, & Mary Ellen Phillips (hereinafter Brown), pages 56, 172 and 173 from Creating shareholder value; by Alfred Rappaport, The Free Press, U.S.A., Declaration Under Rule 132 for Application 10/287,586, dated July 21, 2008 by Dr. Peter Brous and a copy of application 10/287,586. On May 12, 2009 I was given a copy of "What is Value Based Management?" by Timothy Koller. Until that time I had not read the articles, the book pages, the declaration or the application although I have read other applications that are similar including application 09/761,670, application 09/688,983, application 10/287,586 and application 10/821,504. Application 10/298,021 is a continuation of application 09/938,874. I am totally familiar with the language of the claims and conversant with the scope thereof. I completely understand the invention as claimed.

It is my understanding that the Examiner for this application has proposed combining the teachings of Bielinski together with the teachings of Brown to replicate the neural network models developed by the above referenced application. Based on my experience and training in the field of mathematical modeling and electronic data processing, I have concluded that the proposed combination of Bielinski and Brown would destroy the ability of the Value Based Management method taught by Bielinski to function.

Understanding why the functionality of the system described by Bielinski would be destroyed requires some background. Neural networks complete their processing by using a squashing function (usually a sigmoid) that combines data inputs in a linear or non-linear fashion as best fits the data before producing an output. Squashing functions typically have output values between 0 and 1. For prediction models the output node is sometimes given a linear activation function to provide forecasts that are not limited to the zero to one range. The tree based analysis of cash flow taught by Bielinski relies on a finite number of inputs to each node of a tree. The inputs to each node are mathematically combined to produce a value that is passed on up the tree for

mathematical combination in another node (Figure 2 in Bielinski confirms the linear nature of the model). For example, Bielinski discusses breaking the operating profit margin value driver into revenue minus cost of goods sold where the cost of goods sold is further broken down into materials, human resources, technology/capital and other (see diagram below). Bielinski labels these latter four cost categories operational value drivers.



Replacing all or part of the tree with a neural network would destroy the ability of the tree to complete the processing required for the VBM analysis in a number of ways. Replacing part of the tree shown above with a neural network would destroy the ability to complete required processing. The reason for this is that the output value from a neural network (generally between 0 and 1) could not be used to produce the proper input value for the node at the next level as required to complete the mathematical processing of the tree. For example a neural network node could not subtract cost of goods sold from revenue to generate operating profit margin. Replacing the entire tree shown above with a neural network would exacerbate this problem as each intermediate node of the tree would receive only inputs between zero and one that could not combine to produce the required output values for use as inputs to higher level nodes. If the cash flow tree shown above was entirely replaced by a neural network (as claimed) where lower level nodes became nodes in hidden layers within the network, then the same problem with output values would prevent proper functioning at higher level nodes and additional problems would be created. One of these additional problems would be that the user would lose his or her ability to select the inputs to a

node because neural networks determine the combination of inputs that are best suited to produce output values for the next layer in the network during training. The user would also lose the ability to determine the number of nodes and their relationship for similar reasons. In all cases discussed above, the assumption of linearity that is implicit in the use of a tree could also be violated by substituting a neural network for any part of the tree.

Because the lowest level of the Value Based Management analysis method taught by Bielinski contains sub components of value such as production labor and material cost, the Bielinski model also teaches away from the modeling method disclosed in application 10/287,586 which has value drivers for elements of value at the lowest level, elements of value at the second level and subcomponents of value at the third level.

Another way in which Bielinski teaches away from the method disclosed in application 10/287,586 and all other Asset Reliance applications I have reviewed is that Bielinski uses a single tree for both calculating the actual cash flow and identifying the accounts where the revenue, expense and capital charges are incurred.

The Asset Reliance applications I have reviewed create a series of predictive models (in the case of 10/287,586 the predictive model is a neural network model) that use element of value impact summaries as inputs in order to identify the contribution of different elements of value to each of the components of value and to other categories or segments of value (i.e. investments, market sentiment, derivatives). The percentages identified by the predictive model are then combined with the value of the component, category or segment value to calculate a value impact for each element of value.

Modifying Bielinski to use element impact summaries in place of account data would destroy the ability of the Bielinski invention to function as would replacing the tree with a predictive model.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and that these

statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Signed,

Rick M. Rauenzahn

A handwritten signature in black ink, appearing to read "Rick M. Rauenzahn", written in a cursive style.

Date: May 16, 2009

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Appl. No. : 10/743,616

Applicant : Jeff S. Eder

Filed : 22 December 2003

Art Unit : 3692

Examiner : Jennifer Liversedge

Docket No. : AR - 61

Customer No. : 53787

**DECLARATION UNDER RULE 132**

I, Dr. Peter Brous, do hereby declare and say:

My home address is 17221 NE 8<sup>th</sup> Street, Bellevue, WA 98008. I have a B.S. degree in Finance from the University of Connecticut and a PhD in Finance from the University of Oregon.

I have worked in the finance field for 25 years, concentrating in the areas of corporate performance measures, business valuation, capital budgeting, and real option analysis. I have been a professor of finance at Albers School of Business and Economics at Seattle University for 15 years and was recently honored to hold the Dr. Khalil Dibee Endowed Chair.

I further declare that I do not have any direct affiliation with the application owner, Asset Reliance, Inc or its licensee Knacta, Inc. I met the inventor, the President of Knacta, Inc.,



for the first time on October 16, 2007. I understand that Knacta, Inc. has a license to the intellectual property associated with this application. I have had extremely brief discussion of this patent application and the article cited below with the inventor.

On October 25, 2007 I was given a copy of "How to sort out the premium drivers of post deal value", by Daniel Bielinski published in Mergers and Acquisitions in July of 1993. Until that time I had not read the article. However, I have read many articles on the subject of Value Based Management. I have a strong understanding of the concept and practice of Value Based Management and have been teaching this concept for over 10 years. I have studied the entire article and I am totally familiar with the language of the article with the scope thereof.

Based on my experience and education in the field of finance, I have concluded that the the Bielinski article and Value Based Management does not inherently describe or enable: the development of a computational model of enterprise market value by element of value and segment of value where the elements of value are selected from the group consisting of alliances, brands, channels, customers, customer relationships, employees, employee relationships, intellectual capital, intellectual property, partnerships, processes, production equipment, vendors and vendor relationships and the segments of value are selected from the group consisting of market sentiment, real option, derivative, excess financial asset.

There are several reasons for this:

1. As stated in the article VBM is similar to SVA. One of the ways it is similar is that it focuses on "value drivers" such as profit margin and growth instead of intangible assets as part of a tree based analysis of cash flow. Unlike SVA, VBM includes operational value drivers that drive the value drivers. However, these are generally not intangible elements of value. For example, Bielinski provides an example of breaking down profit margin by looking more closely at the cost of materials;
2. VBM is also similar to SVA in that it relies on the efficient market theory and this precludes the analysis of market sentiment;

3. SVA and VBM are tools that focus on the standard valuation model, a discounted cash flow model, that does not even consider the value associated with flexibility or decision making that is done sequentially and conditionally based on the arrival of new information. The valuation of this flexibility is the basis for valuation using real option analysis; and
4. Neither VBM or SVA address the valuation of derivatives.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Signed,



Dr. Peter Brous

Date: 10/31/2007

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Serial No.: 09/764,068

Applicant: Jeff S. Eder

Filed: January 19, 2001

Examiner: Jennifer Liversedge

Art Unit: 3692

Docket No.: AR - 19

Customer No: 53787

**DECLARATION UNDER RULE 132**

I, Gregory Cusanza, do hereby declare and say: my home address is 8604 233<sup>rd</sup> Place NE, Redmond, WA 98053 and I have a B.S. degree in computer science from Cal Poly San Luis Obispo.

I have worked in the data processing field for 16 years, concentrating in the disciplines of data storage, data conversion and enterprise processing. I also have extensive knowledge of computer system administration, particularly for Windows, Linux, and Unix systems. I have been employed by a corporation that was recently purchased by EMC for 12 years, Knacta for 1.5 years and Kantrak, Inc. for the seven months. I own 5% of the issued common stock in Kantrak, Inc.

I further declare that I do not have any direct affiliation with the application owner, Asset Reliance, Inc. I first met the inventor in April of 2004. I joined Kantrak, a company run by the inventor in February 2008. Knacta was also run by the inventor. Kantrak has a license to the intellectual property associated with this application.

On August 30, 2007, I was given a copy of U.S. Patent Application 10/441,385 filed in the United States Patent Office on May 20, 2003. U.S. Patent Application 09/764,068 is the parent of application 10/645,009 and as such has the same specification and drawings. I have studied the entire specification in order to closely analyze the claims and drawings. I am familiar with the language of the claims and conversant with the scope thereof. I understand the invention as claimed.

On October 2, 2008 I was given a copy of U.S. Patent 6,549,922 by Srivastava et al (hereinafter, Srivastava) that is entitled "System for collecting, transforming and managing media metadata" and a copy of U.S. Patent 7,249,328 by Russell T. Davis (hereinafter, Davis) that is entitled "Tree view for reusable data markup language". Until that time I had not read either of these patents and I have not discussed them with anyone.

Based on my experience and education in the field of data storage, data conversion and enterprise processing, I have concluded that:

1. U.S. Patent Application 09/764,068 describes a process for integrating data into an application database and the database can properly be called an integrated database;
2. U.S. Patent Application 09/764,068 describes a process for integrating data into an application database. It would be obvious to anyone of average skill in the art that the integrated database produced by this process is the output of this process; and
3. U.S. Patent Application 09/764,068 describes a process for transforming data from disparate systems into an integrated application database and anyone of average skill in the art of data processing who read the specification would fully understand the scope of the activities associated with the transformation.

I have also attached a drawing that graphically illustrates the difference between the data integration invention described in U.S. Patent Application 09/764,068 and the Davis invention.

Finally, I will reiterate that Srivastava uses the term "metadata mapping" to describe the process of matching a summary description for a file derived from metadata for the file to a schema. 09/764,068 uses the term "metadata mapping" to describe the process of mapping from source database metadata to application database metadata. In other words, Srivastava teaches away from the meaning of metadata mapping disclosed in 09/764,068.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Signed,

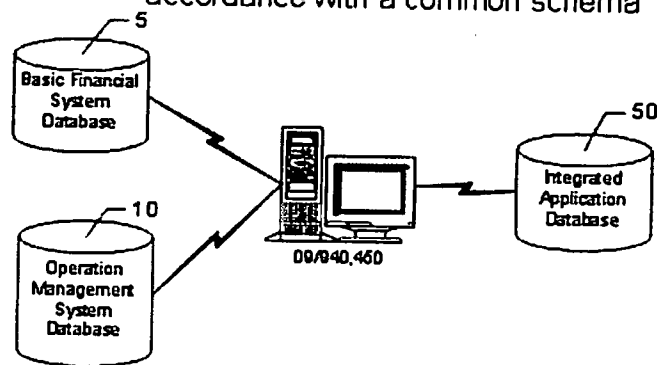
A handwritten signature in black ink, appearing to read "Greg M. Cusanza", written in a cursive style.

4.28-2009

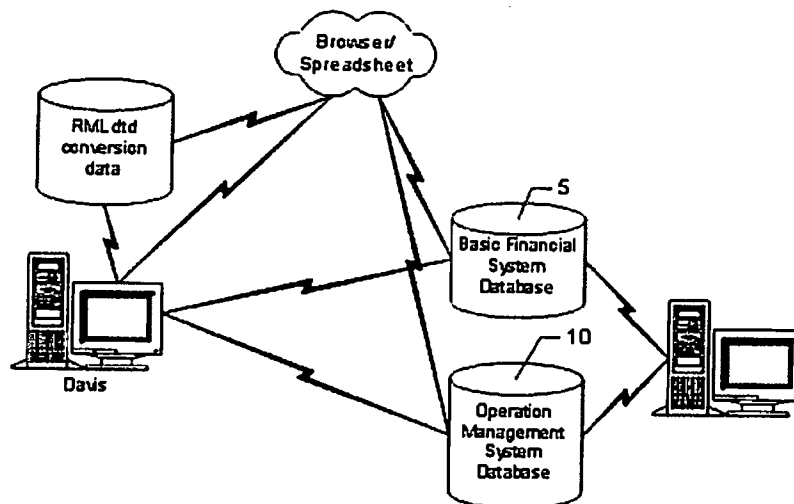
Gregory Cusanza

Date: April 28, 2009

Maps and converts source data to an integrated database in accordance with a common schema



Combines source data and conversion information in an application to produce a graph/presentation





## How much information is too much information?

**Has anyone ever told you during a conversation: “Stop, that’s too much information?” Well University of Queensland psychologists have discovered just how much too much information actually is. Emeritus Professor Graeme Halford and his colleagues from UQ’s School of Psychology have discovered most humans cannot represent relations between more than four variables.**

Their study, *How Many Variables Can Humans Process?*, pushed a group of 30 academics to their mental limits.

Participants were given incomplete descriptions of interactions between variables, with an accompanying set of bar graphs representing the interactions. They were then required to complete the descriptions so that they correctly described the graphs.

“At the level of the four-way interactions, participants made comments such as “Everything fell apart and I had to go back”,” Professor Halford said.

“Only chance levels of performance were obtained for five-way interactions.”

The results have implications for the design of high-stress work environments such as the coordination of fire-fighting operations.

“If the number of variables to be considered exceeds human processing capacity then the worker will drop his or her mental bundle and become unable to proceed,” Professor Halford said.

“More seriously, the worker may revert to a simplified version of the task that does not take all aspects into account and therefore may make the wrong decision.

“This type of problem is particularly acute in tasks that have to be performed under time pressure or where unusual combinations of circumstances are likely to arise.

“Modern high-technology industries produce many situations of this kind because of the number of variables that have to be taken into account in decision making.”

Professor Halford’s team included Dr Rosemary Baker and Dr Julie McCredden from UQ’s School of Psychology and Professor John D Bain from Griffith University.

Their results showed that as the complexity of the interaction increased,

performance and confidence levels dropped significantly.

“While all levels of complexity are logically possible, the evidence suggests that they are not cognitively manageable,” Professor Halford said.

Professor Halford said complex ideas were conceptual structures built in the temporary working area of the mind called the working memory. His findings are the outcome of a decade of research, investigating tasks that push cognitive processing to the limits.

“Four way interactions require humans to represent relations between relations between relations between pairs of bars; which can be reframed mathematically as a four-dimensional task,” he said.

“We found that four dimensions are the most that humans can conceive of.

“Therefore, if the world was five-dimensional, rather than three, we would not be able to understand it.”

Source: The University of Queensland

*This news is brought to you by **PhysOrg.com***



**11. Related Proceedings Appendix** - Attached opinion appears to be based largely on an assumption that VBM is different than SVA in a number of areas where they are in fact the same (see Evidence Appendix, pages 67 - 74). Opinion also appears to contain a number of clear errors because:

1) The cited documents failed to make the invention as a whole obvious by teaching away from the claimed methods. Bielinski teaches: efficient market in place of an inefficient market, a tree based analysis in place of a network analysis and three determinants of market value (cash flow, cash flow risk and growth) in place of the elements of value as determinants of value. Brown teaches: scoring in place of regression and that 40 external factors determine market value in place of elements of value as determinants of value.

2) The cited combination failed to teach one or more limitation for every claim.

3) Modifying the cited documents to replicate the claimed functionality would require changes in the principles of operation for the cited inventions and destroy their ability to function. Bielinski would have to change from a tree to a network and it is well known that substituting a neural network sigmoid in place of the tree node would destroy the ability of the tree to function. Brown would have to change to using elements of value as determinants of value and use regression in place of scoring.

4) The cited documents teach away from their own combination. Bielinski specifically prohibits the use of projections while the cited portion of Brown teaches a method with only one function: projecting changes in stock prices.

5) Bielinski specifically states that the disclosed VBM method follows the principles of Shareholder Value Analysis (SVA). One of the well known principles of SVA is the efficient market theory. In spite of these facts, the BPAI said there was no evidence that Bielinski taught the efficient market theory.

6) Bielinski specifically states that the disclosed VBM method follows the principles of SVA. One of the well known principles of SVA is the tree based analysis of cash flow. In spite of these facts, the BPAI said there was no evidence that Bielinski taught the tree based analysis of cash flow.

7) Bielinski specifically states that the disclosed VBM method follows the principles of SVA. One of the well known principles of SVA is that there are 3 determinants of market value. In spite of these facts, the BPAI said there was no evidence that Bielinski taught that there were 3 determinants of market value.

1 UNITED STATES PATENT AND TRADEMARK OFFICE

2  
3  
4 BEFORE THE BOARD OF PATENT APPEALS  
5 AND INTERFERENCES  
6

7  
8 *Ex parte* JEFFREY SCOTT EDER  
9

10  
11 Appeal 2007-2745  
12 Application 09/761,671  
13 Technology Center 3600  
14

15  
16 Decided: August 29, 2007  
17

18  
19 Before TERRY J. OWENS, HUBERT C. LORIN, and ANTON W. FETTING,  
20 *Administrative Patent Judges.*

21 FETTING, *Administrative Patent Judge.*

22 DECISION ON APPEAL  
23  
24  
25

26 STATEMENT OF CASE

27 Jeffrey Scott Eder (Appellant) seeks review under 35 U.S.C. § 134 of a Final  
28 rejection of claims 69-103, the only claims pending in the application on appeal.

29 We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6.

30  
31 We AFFIRM.  
32

1 The Appellant invented a way to calculate and display a forecast of the impact  
2 of user-specified or system generated changes in business value drivers on the  
3 other value drivers, the elements, the components, the financial performance and  
4 the long term value of a commercial enterprise that utilizes the information from a  
5 detailed valuation of the enterprise (Specification 9:2-7).

6 An understanding of the invention can be derived from a reading of exemplary  
7 claim 69, which is reproduced below [bracketed matter and some paragraphing  
8 added].

9 69. A current operation modeling method, comprising:

10 [1]

11 [a] integrating transaction data

12 [i] for a commercial enterprise

13 [ii] in accordance with a common data dictionary;

14 [b] using a neural network model

15 [i] to identify one or more value driver candidates

16 [ii] for each of one or more elements of value from said data,

17 [c] using an induction model

18 [i] to identify one or more value drivers from said candidates  
19 and

20 [ii] define a contribution summary

21 [1] for each element of value

22 [2] for each of one or more aspects of a current operation  
23 financial performance

24 [3] using said value drivers, and

25 [d] creating a plurality of network models

26 [i] that connect the elements of value

27 [ii] to aspects of current operation financial performance

[iii] using said contribution summaries

[2]

[a] where the elements of value are selected from the group consisting of

[i] brands,

[ii] customers,

[iii] employees,

[iv] intellectual capital,

[v] partners,

[vi] vendors,

[vii] vendor relationships and

[viii] combinations thereof,

[b] where the induction models are selected from the group consisting of

[i] lagrange,

[ii] path analysis and

[iii] entropy minimization,

[c] where the network models support automated analysis through computational techniques and

[d] where the aspects of current operation financial performance are selected from the group consisting of

[i] revenue,

[ii] expense,

[iii] capital change,

[iv] cash flow,

[v] future value,

[vi] value and

[vii] combinations thereof.

1  
2 This appeal arises from the Examiner's Final Rejection, mailed June 13, 2006.  
3 The Appellant filed an Appeal Brief in support of the appeal on October 3, 2006.  
4 An Examiner's Answer to the Appeal Brief was mailed on January 9, 2007. A  
5 Reply Brief was filed on January 27, 2007.

6 PRIOR ART

7 The Examiner relies upon the following prior art:  
8 Daniel W. Bielinski, *How to sort out the premium drivers of post-deal value*,  
9 Mergers and Acquisitions, Jul/Aug 1993, Vol. 28, Iss. 1, pg. 33, 5 pgs. (Bielinski)  
10 Carol E. Brown, James Coakley, and Mary Ellen Phillips, *Neural networks enter*  
11 *the world of management accounting*, Management Accounting, May 1995, Vol.  
12 76, Iss. 11, p. 51, 5 pgs. (Brown)

13 The Appellant relies upon the following prior art, already of record:  
14 Alfred Rappaport, *Creating Shareholder Value*, A Guide for Managers and  
15 Investors, pp. 39, 70, 171, and 172, ISBN 0-684-84410-9, 1998 (Rappaport)

16 REJECTION

17 Claims 69-103 stand rejected under 35 U.S.C. § 103(a) as unpatentable over  
18 Bielinski and Brown.

19 ISSUES

20 Thus, the issue pertinent to this appeal is whether the Appellant has sustained  
21 its burden of showing that the Examiner erred in rejecting claims 69-103 under  
22 35 U.S.C. § 103(a) as unpatentable over Bielinski and Brown.

FACTS PERTINENT TO THE ISSUES

The following enumerated Findings of Fact (FF) are believed to be supported by a preponderance of the evidence.

*Claim Construction*

01. Entropy minimization is an induction algorithm that, starting with nothing, adds variable to composite variable formula as long as they increase the explainability [sic] of result (Specification, 47:Table 23).

02. LaGrange is an induction algorithm that is designed to identify the behavior of dynamic systems and uses linear regression of the time derivatives of the system variables (Specification, 47:Table 23).

03. Path Analysis is an induction algorithm that is essentially equivalent to multiple linear regression that finds the least squares rule for more than one predictor variable (Specification, 47:Table 23).

*Bielinski*

04. Bielinski is directed towards describing how Value Based Management (VBM), an advancement in discounted cash flow modeling, centers on what specific steps can be taken operationally and strategically to add value to a target organization (Bielinski, 1:Abstract).

05. Bielinski describes how sensitivity analysis of past results offers clues to what can be done in the future and which value drivers should receive the most attention to achieve optimal rewards. The VBM technique allows the analyst to figure key decision making trade-offs, since attention to one driver may generate negative effects on others or 2 or

1 more drivers may have to be varied in concert to produce the best results  
2 (Bielinski, 1:Abstract).

3 06. Bielinski describes Value-Based Management (VBM), which keys on  
4 a target's historical operations rather than future projections. VBM also  
5 can calculate the results of trade-offs when decision makers must choose  
6 between a series of factors that can be changed to enhance post  
7 acquisition value (Bielinski, 1:Bottom ¶ - 2:Top line).

8 07. Bielinski describes the best-known valuation tool designed to  
9 facilitate value creation and cash flow enhancement as Shareholder  
10 Value Analysis (SVA), introduced in the 1980s by Prof. Alfred  
11 Rappaport of Northwestern University (Bielinski, 2:First full ¶).

12 08. SVA may be defined as a two-step process. First, a discounted cash  
13 flow business valuation is performed. A projection of future cash flow  
14 (including a residual) is developed and discounted at an appropriate rate,  
15 usually the cost of capital, to arrive at an indicated value. Second, key  
16 factors (or value drivers), such as growth, profit margins, etc., are varied  
17 systematically to test the sensitivity of the indicated business value to  
18 each driver. Standard SVA sensitivity analysis changes each value driver  
19 plus or minus 1%, although analysts now often use "relevant ranges" and  
20 different percentages for upside and downside swings to reflect  
21 prevailing business realities (Bielinski, 2:First full ¶).

22 09. SVA has limitations often magnified into constraints that necessitate  
23 modifying standard SVA analysis. Thus, Rappaport describes and  
24 distinguishes VBM, a first cousin to SVA, which has resulted from these  
25 modifications. Bielinski provides an abbreviated overview of VBM and

describes how it differs from the traditional SVA framework (Bielinski, 2:Second and third full ¶'s).

10. Rather than use projections of future cash flow like SVA, the VBM framework utilizes historical cash flow. Five years of historical cash flow are added up to arrive at a cumulative baseline cash flow number. That is in contrast to SVA's method of discounting future cash flows to reach an indicated value. Instead of testing the sensitivity of a value based on a projection, VBM tests the sensitivity of the historical cash flow. VBM tells the executive how much more or less cash flow would be in the bank today if certain events had occurred differently or if the company had operated differently in the past five years (Bielinski, 2:Fifth and sixth full ¶'s).

11. The use of actual historical data, rather than projections, has proven useful in testing the impact of alternative scenarios against the reality of actual events. It also has served as a catalyst to identify and implement actions that generate improvements. As long as a company's fundamental structure does not change going forward, the results provide meaningful insight regarding the probable outcomes of future strategic action, to the extent that risk is not increased, an executive may reasonably assume that an increase from historical cash flow trends likely would translate into enhanced value (Bielinski, 2:Seventh full ¶).

12. VBM utilizes drivers that are more directly linked to operations. For example, rather than use operating profit margin as a broad value driver, a VBM analysis on a manufacturer would include a breakdown of cost of goods sold by key components (Bielinski, 2:Eighth full ¶).



- 1           13. Bielinski provides an example of a mix for VRM analysis including  
2           materials, human resources, technology and capital, and other costs of  
3           goods sold as value drivers (Bielinski, 2:Bottom five full ¶'s).
- 4           14. VBM essentially utilizes SVA principles but advances the basic  
5           techniques by incorporating historical data, operations-linked value  
6           drivers, and concurrent changes in multiple value-drivers (Bielinski,  
7           3:Third full ¶).
- 8           15. Bielinski shows the sensitivity of the baseline cash flow to changes in  
9           key factors. Showing how results might have turned out differently if  
10          operating or strategic changes been effected in the recent past suggests  
11          improvements that can be made in the future (Bielinski, 3:Sixth full ¶).
- 12          16. Sensitivity analysis can show how changes in key cost and operating  
13          components can impact cash flow. One striking conclusion is that the  
14          areas where the big dollars are do not always offer the greatest  
15          opportunities to improve cash flow and value (Bielinski, 3:Seventh and  
16          eighth full ¶).
- 17          17. Bielinski describes how SVA can tie strategic changes directly to  
18          manufacturing by future initiatives to control costs, eliminating  
19          overspecification and establishing better value chain management  
20          (Bielinski, 3:Bottom ¶).
- 21          18. And if both the acquirer and target utilize VBM in constructing a  
22          projection, the two sides might come close to reaching a consensus on  
23          what constitutes a "realistic" projection of future performance (Bielinski,  
24          4:Bottom ¶).

1           19. With VBM, sensitivity analysis of past results offers clues to what can  
2           be done in the future and which value drivers - e.g., sales growth, profit  
3           margins, productivity, etc. - should receive the most attention to achieve  
4           the optimal rewards. Additionally, the VBM technique allows the analyst  
5           to figure key decision making trade-offs, since attention to one driver  
6           may generate negative effects on others or two or more drivers may have  
7           to be varied in concert to produce the best results (Bielinski, 5:Keys to  
8           creating value).

9           *Brown*

10          20. Brown is an accounting journal article describing how artificial  
11          intelligence (AI) is implemented in business practices. Three of the most  
12          common methods parallel the way people reason: rules (inference  
13          procedures), cases (case-based reasoning), and pattern matching (neural  
14          networks). These methods may be used separately or in combination and  
15          currently are being used to solve a variety of business tasks (Brown  
16          51:Left col., Bottom ¶ - Center col.).

17          21. Neural networks use pattern matching. The financial services industry  
18          with its large databases has fielded several successful neural network  
19          applications, and neural networks based on information about customers  
20          or potential customers have proved effective. If large databases exist  
21          with which to train a neural network, then use of that technology should  
22          be considered. For a neural network the large database can be used as the  
23          equivalent of the human expert (Brown 52:Center col., Second ¶).

1           22. Neural networks are used for forecasting future sales and prices,  
2           estimating future costs, and planning future schedules and expenditures  
3           (Brown 53:Left col., Forecasting and Scheduling).

4           23. An air carrier's improved scheduling makes aircraft operations more  
5           predictable, reduces delays, and reduces fuel costs by shortening the  
6           time aircraft spend waiting for available gates. More efficient scheduling  
7           raises the number of flights by each aircraft, increases revenue, provides  
8           better management of disruptions, and improves passenger service  
9           (Brown 53:Left col.-middle col., Forecasting and Scheduling).

10          24. A provider of hospital supplies, uses a neural network to identify the  
11          key characteristics of the best customers and searches the inactive  
12          customer list for the highest probability purchasers from those who are  
13          inactive. Neural networks also help with customer service and support  
14          (Brown 53:Center col., First full ¶).

15          25. As businesses reorganize based on customer needs, neural networks  
16          can help them analyze past business transactions so they can understand  
17          their customers' buying patterns. One neural network for database  
18          mining has been tailored for database marketing (Brown 53:Center col.,  
19          Second full ¶).

20          26. Many systems also have been developed to help investors and  
21          investment companies manage investments in securities. One company  
22          has a neural network it uses as a decision aid in stock purchases for  
23          mutual funds. The neural network makes a very accurate forecast about  
24          10% of the time; the other 90% of the time it makes no forecast at all.  
25          Another company uses a neural network to manage the \$100 million

1 equity portfolio of its pension fund. Forty indicators are used to rank the  
2 expected future returns of 1,000 equities. Currently owned stocks are  
3 sold and are replaced by those with future return rating over a certain  
4 cutoff, which results in an 80% monthly turnover. The portfolio return,  
5 net of transaction costs, exceeds that of the Standard & Poor's 500 index.  
6 Other firms use neural network to predict the S & P 500 index and the  
7 performance of stocks and bonds to help market traders in making their  
8 buy, hold, and sell decisions. The system recognizes patterns in market  
9 activity before they are apparent to a human, which may mean millions  
10 in trading profits (Brown 56:Center col., Investments).

11 *Rappaport*

12 27. Rappaport describes techniques for creating shareholder value  
13 (Rappaport Title).

14 28. A component of the cost of equity is a risk premium. One way of  
15 estimating the risk premium for a particular stock is by computing the  
16 product of the market risk premium for equity (the excess of the  
17 expected rate of return on a representative market index such as the  
18 Standard & Poor's 500 stock index over the risk-free rate) and the  
19 individual security's systematic risk, as measured by its beta coefficient  
20 (Rappaport 39:Middle full ¶).

21 29. Rappaport teaches that three factors determine stock prices: cash  
22 flows, a long-term forecast of these cash flows, and the cost of capital or  
23 discount rate that reflects the relative risk of a company's cash flows.  
24 The present value of a company's future cash flows, not its quarterly  
25 earnings, determines its stock price (Rappaport 70:Last full ¶).

1           30. Rappaport teaches that business value depends on seven financial  
2           value drivers: sales growth, operating profit margin, incremental fixed  
3           capital investment, incremental working capital investment, cash tax  
4           rate, cost of capital, and value growth duration. While these drivers are  
5           critical in determining the value of any business, they are too broad to be  
6           useful for many operating decisions. To be useful, operating managers  
7           must establish for each business the micro value drivers that influence  
8           the seven financial or macro value drivers.

9           31. Rappaport teaches that an assessment of these micro value drivers at  
10          the business unit level allows management to focus on those activities  
11          that maximize value and to eliminate costly investment of resources in  
12          activities that provide marginal or no potential for creating value. Value  
13          driver analysis is a critical step in the search for strategic initiatives with  
14          the highest value-creation leverage. Isolating these key micro value  
15          drivers enables management to target business unit operations that have  
16          the most significant value impact and those most easily controlled by  
17          management.

18          32. Rappaport teaches that the first step of a value driver analysis is to  
19          develop a value driver "map" of the business. This involves identifying  
20          the micro value drivers that impact sales growth, operating profit  
21          margins, and investment requirements. Armed with a better  
22          understanding of micro value driver relationships, the next step is to  
23          identify the drivers that have the greatest impact on value.

24          33. Rappaport provides an illustrative table (Rappaport 172:Figure 9-3.  
25          Micro and Macro Value Drivers) that presents the sensitivity of

shareholder value to changes in selected drivers for retail as well as industrial marketing (Rappaport 172:Top ¶).

34. Rappaport teaches that most managers believe they can identify the key drivers for their business. However, these drivers may in many cases be appropriate for a short-term-earnings-driven business rather than an organization searching for long-term value. Experience shows that value driver sensitivities are not always obvious. Therefore, quantifying sensitivities is a valuable exercise for both operating and senior management (Rappaport 172:First full ¶).

# PRINCIPLES OF LAW

### Claim Construction

During examination of a patent application, pending claims are given their broadest reasonable construction consistent with the specification. *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550 (CCPA 1969); *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364, (Fed. Cir. 2004).

Although a patent applicant is entitled to be his or her own lexicographer of patent claim terms, in *ex parte* prosecution it must be within limits. *In re Corr*, 347 F.2d 578, 580, 146 USPQ 69, 70 (CCPA 1965). The applicant must do so by placing such definitions in the Specification with sufficient clarity to provide a person of ordinary skill in the art with clear and precise notice of the meaning that is to be construed. *See also In re Paulsen*, 30 F.3d 1475, 1480, 31 USPQ2d 1671, 1674 (Fed. Cir. 1994) (although an inventor is free to define the specific terms used to describe the invention, this must be done with reasonable clarity, deliberateness, and precision; where an inventor chooses to give terms uncommon meanings, the inventor must set out any uncommon definition in some manner

1 within the patent disclosure so as to give one of ordinary skill in the art notice of  
2 the change).

3 *Obviousness*

4 A claimed invention is unpatentable if the differences between it and the  
5 prior art are “such that the subject matter as a whole would have been obvious at  
6 the time the invention was made to a person having ordinary skill in the art.” 35  
7 U.S.C. § 103(a) (2000); *KSR Int’l v. Teleflex Inc.*, 127 S.Ct. 1727, 1734, 82  
8 USPQ2d 1385, 1391 (2007); *Graham v. John Deere Co.*, 383 U.S. 1, 13-14, 148  
9 USPQ 459, 466 (1966).

10 In *Graham*, the Court held that that the obviousness analysis is bottomed on  
11 several basic factual inquiries: “[ (1) ] the scope and content of the prior art are to be  
12 determined; [ (2) ] differences between the prior art and the claims at issue are to be  
13 ascertained; and [ (3) ] the level of ordinary skill in the pertinent art resolved.” 383  
14 U.S. at 17, 148 USPQ at 467. *See also KSR Int’l v. Teleflex Inc.*, 127 S.Ct. at  
15 1734, 82 USPQ2d at 1391. “The combination of familiar elements according to  
16 known methods is likely to be obvious when it does no more than yield predictable  
17 results.” *Id.* 127 S.Ct. at 1739, 82 USPQ2d at 1395.

18 “When a work is available in one field of endeavor, design incentives and  
19 other market forces can prompt variations of it, either in the same field or in a  
20 different one. If a person of ordinary skill in the art can implement a predictable  
21 variation, § 103 likely bars its patentability.” *Id.* 127 S. Ct. at 1740, USPQ2d at  
22 1396.

23 “For the same reason, if a technique has been used to improve one device,  
24 and a person of ordinary skill in the art would recognize that it would improve

1 similar devices in the same way, using the technique is obvious unless its actual  
2 application is beyond his or her skill.” *Id.*

3 “Under the correct analysis, any need or problem known in the field of  
4 endeavor at the time of invention and addressed by the patent can provide a reason  
5 for combining the elements in the manner claimed.” 127 S. Ct. at 1742, USPQ2d at  
6 1397.

### 7 ANALYSIS

8 *Claims 69-103 rejected under 35 U.S.C. § 103(a) as unpatentable over Bielinski*  
9 *and Brown.*

10 The Appellant argues these claims as a group. Although the Appellant  
11 nominally contends each of the independent claims individually, each of the  
12 contentions for the remaining independent claims refers back to the arguments for  
13 claim 69.

14 Accordingly, we select claim 69 as representative of the group.  
15 37 C.F.R. § 41.37(c)(1)(vii) (2006).

16 We initially construe claim 69. We find that claim 69 is divided into two parts,  
17 [1] and [2]. Part [1] recites the method steps, which, overall perform element [1.a]  
18 integrating data, by step [1.b] using a neural network model to identify a first set of  
19 candidates, from which step [1.c] further identifies a set of drivers, and defines a  
20 set of contribution summaries, finally, in step [1.d] creating network models with  
21 the summaries. Thus, claim 69 contains three steps, [1.b-d] that are employed  
22 within step [1.a]. Steps [1.b-d] are necessarily sequential because each of [1.c] and  
23 [1.d] requires output from the preceding step. Part [2] identifies components used



1 in the steps in part [1], and thus limits the terms those components are used in  
2 within part [1].

3 The Examiner found that Bielinski describes all of the elements of claim 69  
4 except for the use of neural network models using the indicators and a portion of  
5 the data to identify value driver candidates. To overcome this deficiency, the  
6 Examiner found that Brown described valuation using neural networks and training  
7 neural network models for aspects of financial performance using indicators. The  
8 Examiner concluded that it would have been obvious to a person of ordinary skill  
9 in the art to have combined Bielinski and Brown to take advantage of neural  
10 networks to increase accuracy of models (Answer 3:Bottom ¶ - 4:Full page).

11 The Appellant contends that Bielinski<sup>1</sup> and Brown: (1) teach away from the  
12 proposed combination; (2) would require a change in operating principle; (3) if  
13 combined, would destroy the ability of one of the methods to function; (4) fails to  
14 make the invention as a whole obvious; and (5) fails to meet any of the criteria for  
15 establishing a prima facie case of obviousness (Br. 12:Third ¶).

16 *Teaching Away*

17 (1) The Appellant argues that Rappaport's description of only three market  
18 value determinants, is incompatible with Brown's forty determinants (Br.  
19 12:Bottom ¶).

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<sup>1</sup> The Appellant relies on Rappaport to support many of its arguments regarding Bielinski, apparently treating Rappaport as having been incorporated by reference within Bielinski, based on Bielinski's described usage of Rappaport's Shareholder Value Analysis (Bielinski, 30:First full ¶). The Brief somewhat confusingly attributes text actually found in Rappaport to Bielinski. In this opinion, when we refer to Rappaport's text, based on either the Appellant's contentions, or on our own analysis and fact finding, we attribute that text to Rappaport.

1 We initially find that here, as throughout the arguments in the Brief, the  
2 Appellant has somewhat rhetorically attributed the teachings of Rappaport, and in  
3 particular certain assertions within Rappaport, to Bielinski as a device to discredit  
4 the combination of Bielinski and Brown. While Bielinski refers to the teachings of  
5 Rappaport, as we noted in footnote [1], this does not necessarily mean that  
6 everything taught and asserted by Rappaport is necessarily embraced by  
7 Bielinski's teachings. In particular, Bielinski distinguishes its VBM technique  
8 from Rappaport's SVA technique (FF 09).

9 As to the merits of the Appellant's argument, although Rappaport describes  
10 that three factors determine stock prices (FF 29), we find that Bielinski describes  
11 several market value drivers and implies there are more (FF 19). Also, we find that  
12 Bielinski describes drivers of varying scope (FF 12), such that the broadest drivers  
13 taught by Rappaport can be broken down into more drivers more directly linked to  
14 operations.

15 On the other hand, the forty indicators taught by Brown that the Appellant  
16 contends are incompatible relate to portfolio analysis across multiple companies  
17 (FF 26) rather than analysis of a single company as taught by Bielinski (FF 04). It  
18 is hardly surprising and totally irrelevant that an application comparing multiple  
19 companies might use more indicators than a single company.

20 The Appellant has not sustained its burden of showing the Examiner erred.

21 (2) The Appellant argues that Bielinski's teachings imply an efficient market,  
22 which is incompatible with an inefficient market implied by Rappaport (Br. 13:Top  
23 ¶).

24 The Appellant bases this argument again on Rappaport rather than Bielinski as  
25 such, pointing to Rappaport's description of a market risk quantifier, beta (FF 28).

1 The Appellant contrasts this with Brown's use of neural networks to select  
2 individual stocks in a portfolio (FF 26). Thus, the Appellant has, as in the previous  
3 argument, assigned an SVA teaching by Rappaport to Bielski that is not  
4 necessarily applicable to Bielski's VBA, and compared Bielski's single  
5 company analysis to Brown's example of portfolio analysis. More to the point, we  
6 find there is nothing fundamentally incompatible between a measure of market risk  
7 and portfolio selection as suggested by the Appellant, particularly since it is widely  
8 known that the purpose of portfolios is to manage risk. None of the three  
9 references make any connection between their teachings and either an efficient or  
10 inefficient market hypothesis.

11 The Appellant has not sustained its burden of showing the Examiner erred.

12 (3) The Appellant argues that Bielski's reliance on long term cash flow  
13 analysis is incompatible with Brown's short term analysis, and that Bielski  
14 specifically teaches away from the use of projections for any aspect of analysis  
15 (Br. 13:Second ¶).

16 We again find that the Appellant compared Bielski's single company analysis  
17 to Brown's example of portfolio analysis, as the short term analysis pointed to by  
18 the Appellant (Brown 56:reference to 80% monthly turnover) is again within the  
19 investment analysis examples of Brown.

20 We further find that the Appellant is conflating the two distinct operations  
21 performed by Bielski's VBM. In particular, Bielski first tests the sensitivity of  
22 long term historical cash flow to different operating assumptions about past  
23 operations (FF 10). Then Bielski applies the results of this sensitivity analysis to  
24 future strategic action (FF 11). Contrary to the Appellant's contention, Bielski  
25 specifically teaches the use of projections in this phase of the analysis.

1       Bielinski does not characterize the time frame for analysis of future action, but  
2 we find that such projected time frames typically include relatively short term time  
3 frames because of the inherent uncertainty in projections that increases with time  
4 frame. We further find that there is nothing in Bielinski that would suggest that the  
5 time frame for the projection phase of the analysis is incompatible with a shorter  
6 time frame.

7       The Appellant has not sustained its burden of showing the Examiner erred.

8       (4) The Appellant argues that Rappaport's use of a tree based model topology  
9 is incompatible with Brown's network topology (Br. 13:Third ¶).

10       The Appellant has made a broad contention of the incompatibility of these  
11 methods without a specific showing of the nature of their incompatibility. The  
12 Appellant bases this argument again on Rappaport rather than Bielinski as such,  
13 contending that Rappaport implicitly teaches a tree methodology. We find that  
14 nothing in Rappaport specifically refers to a tree based model topology. Rappaport  
15 presents a figure of a tree diagram to represent the hierarchical nature of  
16 organizational costs and activities (FF 33), but makes no representation as to how  
17 this is incorporated within the model.

18       Even if Bielinski's VBM were to employ a tree based methodology, we find  
19 nothing inconsistent with employing a neural network within each of the branches  
20 of the tree's analysis. Further, we find nothing incompatible with assigning neural  
21 network analysis to Bielinski's phase of finding driver candidates as in claim 69  
22 element [1.b.] and assigning a tree based induction model to identify drivers as in  
23 element [1.c.]. The Appellant has not made any contention otherwise.

24       The Appellant has not sustained its burden of showing the Examiner erred.

1 (5) The Appellant argues that Bielinski's usage of sensitivity analysis is  
2 incompatible with Brown's neural network scoring for the same data (Br.  
3 13:Bottom ¶).

4 We again find that the Appellant compared Bielinski's single company analysis  
5 to Brown's example of portfolio analysis, as the scoring pointed to by the  
6 Appellant (Brown 56:reference to ranking of future returns of stocks) is again  
7 within the investment analysis examples of Brown.

8 Further, Bielinski applies the results of its sensitivity analysis to future strategic  
9 action (FF 11). Similarly, Brown applies its results to future strategic actions (FF  
10 22). We find nothing incompatible between using the results of sensitivity  
11 analysis, their implications for future actions, and the results of neural networks for  
12 suggesting future actions.

13 The Appellant goes on to argue that Bielinski and Brown are measuring the  
14 same thing and there would be no point in using two methodologies to measure the  
15 same thing (Br. 13:Bottom ¶). We find this is not an argument of incompatibility,  
16 but of so much compatibility as to be redundant. We further find that Bielinski and  
17 Brown base their analysis on different inputs (Bielinski using cash flows and  
18 Brown using large databases) and the use of different analytical methods to  
19 converge on a common result to reduce uncertainty is widely known and applied.

20 The Appellant has not sustained its burden of showing the Examiner erred.

21 *Changing Principle of Operation*

22 The Appellant argues that Bielinski and Rappaport's Shareholder Value  
23 Analysis (SVA) would change Brown's neural network because it would use a tree  
24 based analysis, acknowledge that the efficient market theory does not explain all

1 value changes, and acknowledge that cash flow explains only a portion of the value  
2 of an enterprise (Br. 14:Top ¶). The Appellant further argue that Bielinski's Value  
3 Based Management (VBM) would change Brown's strict reliance on historical  
4 cash flow and the related prohibition against using projections of any kind (Br.  
5 14:Second ¶).

6 We find that these contentions are all repetitions of those made under the rubric  
7 of teaching away, *supra*, but couched as changing principles of operation, and our  
8 findings are the same. The Appellant has made no contention specifically  
9 demonstrating that the combination of Bielinske and Brown would necessarily  
10 change the principles of their operation, particularly since Brown's neural network  
11 might be used in performance of element [1.b.] and Bielinski's VBM in  
12 performance of [1.c.] of claim 69, thus not requiring any overlap of their operation.

13 The Appellant has not sustained its burden of showing the Examiner erred.

14 *Destruction of Ability to Function*

15 The Appellant argues that VBM requires that inputs to each node in a tree  
16 arithmetically combine to produce an input to a higher level in the tree. The  
17 Appellant contends that use of a neural network would destroy the ability to  
18 arithmetically generate the numbers required at each tree node. The Appellant  
19 similarly contends that the use of a tree would destroy the neural network's ability  
20 to function (Br. 14:Bottom ¶ - 15:Top ¶).

21 We find that these contentions are all repetitions of those made under the rubric  
22 of teaching away, *supra*, but couched as destroying the ability to function, and our  
23 findings are the same. The Appellant has made no contention specifically  
24 demonstrating that the combination of Bielinske and Brown would necessarily  
25 destroy the abilities of their operation, particularly since Brown's neural network

1 might be used in performance of element [1.b.] and Bielinski's VBM in  
2 performance of [1.c.] of claim 69, thus not requiring any overlap of their operation.

3 The Appellant has not sustained its burden of showing the Examiner erred.

4 *Failure to Make Invention as a Whole Obvious*

5 The Appellant repeats the arguments regarding teaching away and concludes  
6 that the invention is therefore not obvious as a whole (Br. 15:First full ¶).

7 We find that these contentions are all repetitions of those made under the rubric  
8 of teaching away, *supra*, but couched as making the invention as a whole obvious,  
9 and our findings are the same.

10 The Appellant has not sustained its burden of showing the Examiner erred.

11 *Failure to Make Prima Facie Case for Obviousness*

12 The Appellant argues (1) there is no evidence for the motivation to combine  
13 the references; (2) there is no reasonable expectation of success for the same  
14 reasons the combination would destroy their ability to function; and (3) the  
15 combination fails to include optimization techniques (Br. 15:Bottom ¶ - 16:Top  
16 three ¶'s).

17 We find that both Bielinski and Brown describe analytical techniques  
18 employed to find drivers for improving organizational performance. Brown  
19 teaches that neural networks may be used to analyze past business transactions so  
20 they can understand customers' buying patterns, whereas Bielinski teaches how  
21 VBM sensitivity analysis of past results offers clues to what can be done in the  
22 future and which value drivers should receive the most attention to achieve optimal  
23 rewards. Thus both are directed towards analysis of past business operations to  
24 offer clues to changing future operations to improve business performance. It

1 would have been obvious to a person of ordinary skill in the art to have adapted  
2 techniques from each of Brown and Bielinski to provide the advantages of each  
3 technique in improving overall performance.

4 The Appellant has not sustained its burden of showing the Examiner erred.

5 *Reply Brief*

6 We find that the Appellant has made general allegations that the combination  
7 of Bielinski and Brown fails to teach or suggest any of the claim limitations of  
8 claims 77-103 for the first time in the Reply Brief. A statement which merely  
9 points out what a claim recites will not be considered an argument for separate  
10 patentability of the claim. 37 C.F.R. 41.37(c)(1)(vii). A general allegation that the  
11 art does not teach any of the claim limitations is no more than merely pointing out  
12 the claim limitations. Thus, these claims fall along with claim 69.

13 The Appellant has not sustained its burden of showing that the Examiner erred  
14 in rejecting claims 69-103 under 35 U.S.C. § 103(a) as unpatentable over Bielinski  
15 and Brown.

16 CONCLUSIONS OF LAW

17 The Appellant has not sustained its burden of showing that the Examiner erred  
18 in rejecting claims 69-103 under 35 U.S.C. § 103(a) as unpatentable over the prior  
19 art.

20 On this record, the Appellant is not entitled to a patent containing claims  
21 69-103.



DECISION

To summarize, our decision is as follows:

- The rejection of claims 69-103 under 35 U.S.C. § 103(a) as unpatentable over Bielinski and Brown is sustained.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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